M. M. & R. MICROSCOPIC SPECIALTIES

We have built an enviable reputation in the scientific field for the unvarying quality of MM&R Essential Oils and Balsams for microscopic work.

The products we offer are guaranteed to conform with the exacting standards of the research laboratories.

OIL CEDARWOOD
Microscopic for Clearing—U. S. P. Reagent.
Microscopic for Immersion—U. S. P. Reagent.
Refractive Index—1.515 at 18°C.)

BALSAM FIR CANADA—Paper Filtered

BALSAM FIR CANADA—Paper Filtered, Clarified, Commercially Neutral.

BALSAM FIR CANADA—In Xylol
Prepared in accordance with U. S. Specifications, uniform in viscosity and non-volatile bodies. Recommended for attaching cover glasses.

BALSAM FIR CANADA—Dried
The Resinous residue obtained by removing the volatile oil or terpenes.

OIL ORIGANUM CRETIC

TERPINEOL—Microscopic

M. M. & R. AQUASOLS

(Water Soluble Perfumes)

Recommended for use where a strong scent is desired in an aqueous media.

Under this classification there is available to the manufacturer the complete line of Essential Oils, Aromatic Chemicals or perfume Bouquets in water solution, with a special vehicle incompatible with strong saline solutions, solutions of metallic salts, acids, or salts of the alkaline earths.

It is recommended that Aquasols be diluted with distilled water. Should a slight haziness develop, this can usually be eliminated by the addition of a small quantity of Borax or Soda Carbonate.

MAGNUS, MABEE & REYNARD, INC.

32 Cliff Street New York City

Mohawk Brand Oil Peppermint
Aromatic Chemicals
Natural Isolates
Perfume Oils
Infused Oils
Balsams

"LINKS THE MARKET WITH THE MANUFACTURER"

Terpeneless Essential Oils
Basic Flavoring Materials
Paragon Olive Oil
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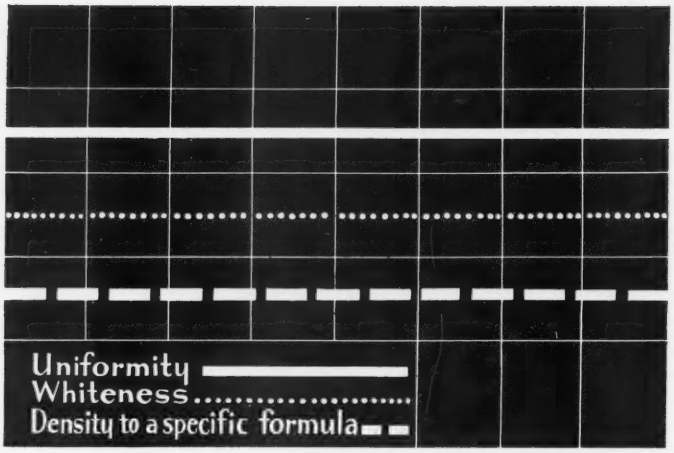

Lines which never vary

IN a world of fluctuating values, here's one chart which records a never varying stability. Manufacturers of tooth paste know this. To their chemists, production men, their department executives, it's an old story.

Sturge's Standard Precipitated Chalk is dependable. Once you determine the precise grade suitable for your formula, you can be sure that no trouble from the precipitated chalk will ever hinder the growth of your product.

Rigid uniformity in its pure white color, its physical and chemical constants, Sturge's Standard Precipitated Chalk will meet your requirements wherever precipitated chalk is used.

Stocks carried in the United States

JOHN & E. STURGE, Ltd., Birmingham, England

Distributors:

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271 Madison Ave., New York, N. Y.

FOR A GOOD TOOTH PASTE

GIVAUDAN-DELAWANNA INC.

LE CHIMISTE

De la Galerie de S.A.S Monseigneur le Duc d'Orleans

80, FIFTH AVENUE_NEW-YORK

LILAS FLEURS No. 31

Puts A High Grade Lilac Within Reach of the Lower Priced Cosmetic Line!

For an exceptionally fresh lilac note, this Lilas Fleurs No. 31 can be used either alone or in combination. It is suitable for use in a complete line. It causes no discoloration.

Let's all be there!
Eighth Annual New York
Drug Trade Dinner
Hotel Waldorf-Astoria
Thursday, March 16th, 1933

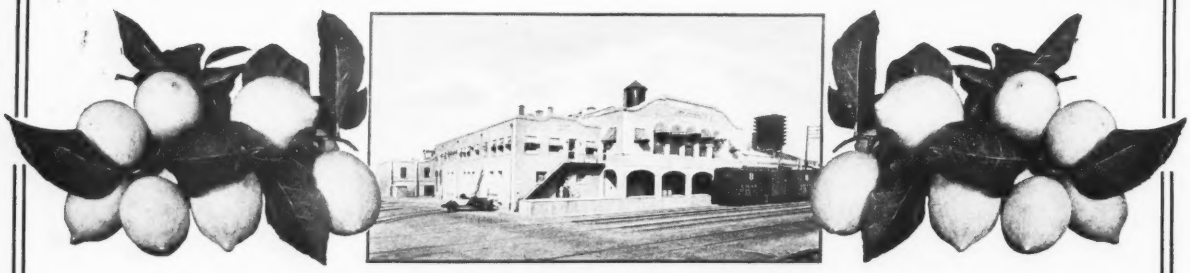
Let us send you samples of Lilas Fleurs No. 31 so you can make a test. You will be convinced!

$9.50 per pound

GIVAUDAN-DELAWANNA

INCORPORATED

80 FIFTH AVENUE NEW YORK, N. Y.



Made from American Lemons

Exchange Brand Citric Acid U. S. P. is made from American Lemons by the Exchange Lemon Products Company of Corona, California. It is backed by the Sunkist group of 13,200 California Citrus growers, the largest in the world. Immediate shipments are made from warehouse stocks in New York, Chicago, Philadelphia and St. Louis. Consult any of our distributors for prices on kegs, barrels or carloads.

Exchange BRAND

CITRIC ACID U. S. P.

CRYSTALS · GRANULAR · POWDERED

DISTRIBUTED EAST OF THE ROCKIES BY

Mallinckrodt CHEMICAL WORKS
St. Louis Philadelphia
New York Chicago

J. T. BAKER CHEMICAL COMPANY
Phillipsburg
New Jersey

DODGE & OLCOTT COMPANY,
180 Varick Street,
New York City

NEW YORK QUININE & CHEMICAL WORKS
101 North 11th Street
Brooklyn, New York

SWANN CHEMICAL COMPANY, Birmingham, Alabama

PACIFIC COAST SERVED BY

Products Department - CALIFORNIA FRUIT GROWERS EXCHANGE, Ontario, California

"SO THAT'S THE *PACKAGE* OF THE CENTURY... EH?"

Possibly the gentleman with the glint in his eye is a production manager—which would account for his slightly skeptical air.

As a hard-headed business man he's naturally suspicious of radical innovations. He knows that some packages, even though artistic, can prove perfectly impossible in actual production—considering *economical* packing and sealing processes. And who doesn't have to consider economy today?

★ ★ ★

Anchor has always been strong for good looks in packages and in closures. We've preached it for years, and are fully convinced of the sales power of pleasing appearance. Yet we're more than sympathetic with production-minded men. It's almost an obsession with us that a closure first and last be practical.

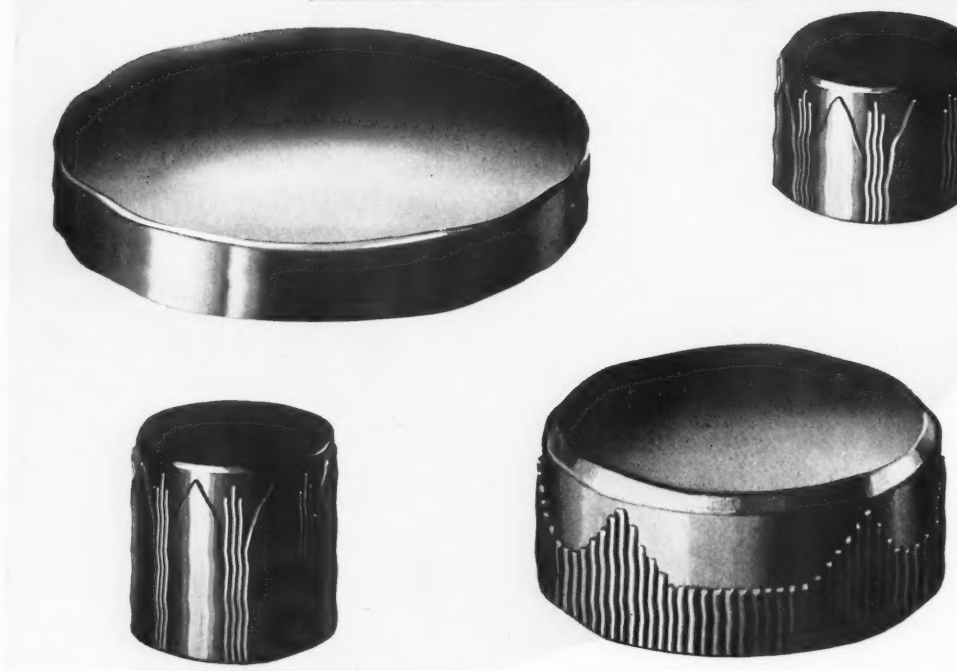
On the one hand, we admit there are other closures on the market besides Anchor that are attractive in appearance—although Anchor takes off its hat to none in the matter of good looks.

But on the other hand, what we do say, as emphatically as we can, is that every single Anchor style is designed, first of all, to do the best possible sealing job—to adequately protect the products for which it is adapted. They have been developed and improved by sealing experts, by men familiar with production problems, by an organization that for a quarter of a century has been making closures to fit packaging methods and production conditions... economically.

★

ANCHOR CAP & CLOSURE CORPORATION
Long Island City, N. Y. · · · Toronto, Canada
BRANCHES IN ALL PRINCIPAL CITIES

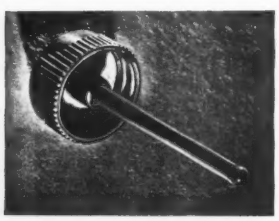
ANCHOR MOLDED CAPS



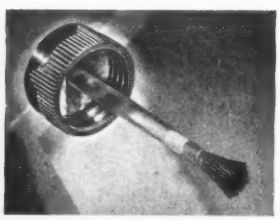
● In the foreground is the Anchor Molded Bottle Cap, a style that has rapidly come into popular favor and been adopted as standard for hundreds of drugs, toilet preparations and specialties. Note the finely knurled design that aids the fingers in gripping, which is an advantage both to the manufacturer in application, and is appreciated by the consumer in using the product.

Back of the standard bottle cap are shown the jar cap with its severe and simple lines; and the medium and tall bottle caps with their conservative Gothic design to give them smartness without flashiness, to accentuate their height and to provide a good gripping surface.

MOLDED CAPS WITH APPLICATOR DEVICES

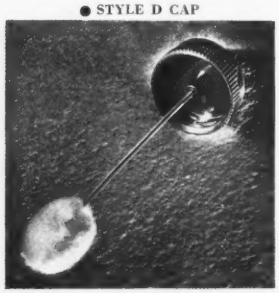


● STYLE A CAP

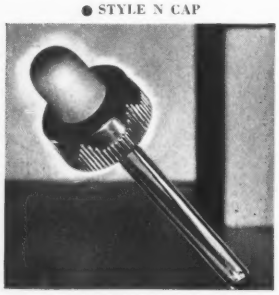


● STYLE P CAP

● STYLE D CAP



● STYLE N CAP



In order to provide maximum convenience for the user, certain products can use to advantage various types of applicators that are an integral part of the package. For meeting these conditions, Anchor Molded Bottle Caps are supplied in a number of variations to accommodate different types of applicators. The closures and liners designed to accommodate the applicators are furnished by Anchor; the assembling with the applicator device being done either by the packager or the manufacturer of the applicator.

Style A Cap is constructed with a projection for insertion of a glass applicator rod or quill brush.

Style D Cap has the same sort of projection of a suitable size to accommodate a wire dauber.

Style N Cap is provided with a hole molded in the top, into which is inserted a nipple and dropper tube. The nipple is so constructed as to hold the tube in place.

Style P Cap has a solid pin over which a quill brush is fitted and cemented.

Designed · FOR EFFICIENCY

● Caps made of plastic materials are inherently beautiful; the material itself rich and lustrous. Added to that, Anchor has created special designs for the different styles to take full advantage of the beauty of the material. Anchor Molded Caps are conservative, dignified, well proportioned, tasteful.

But beyond appearance, Anchor Molded Caps are unique in other ways—*in their sealing efficiency, in their adaptability to* either machine or hand application, in their ease of removal and convenience to the consumer. It is these less spectacular but highly important points of superior efficiency that we want to emphasize.

The sealing results provided by Anchor Molded Caps are attributable to certain specific features of construction. Chief among these are the *liner retaining ledge* and the *liner recess.* These consist of a ridge or projection which encircles the inside of the cap; and the recess above it into which the liner fits. The function of these two features is to hold the liner securely in place; and yet at the same time allow it to rotate freely as the cap is applied or removed.

By ensuring that the liner always stays in place, the product is never left unprotected. Hence a positive safeguard is provided against leakage, evaporation or deterioration of the contents. And against consumer or dealer dissatisfaction, as well.

More directly, too, the manufacturer benefits—because these features make practical machine application; because they permit caps to be delivered completely assembled, saving time and expense; because they make unnecessary the use of oversize liners which are apt to buckle, wrinkle or cause cap breakage; because they permit the liner to rotate freely, thus preventing injury to its surface from imperfections in the glass as caps are applied, removed, or reapplied.

The scientifically constructed thread in Anchor Molded Caps is specially designed for application to glassware made to Glass Container Association standards. It is broad and shaped to conform to the glass thread and to give a firm, sure grip around the entire circumference of the bottle. Its length is exactly predetermined to prevent jamming or interfering with the proper seating of the liner. The unique thread construction promotes an even distribution of sealing pressure, provides greater strength to the cap, and is the determining factor in easy application and removal.

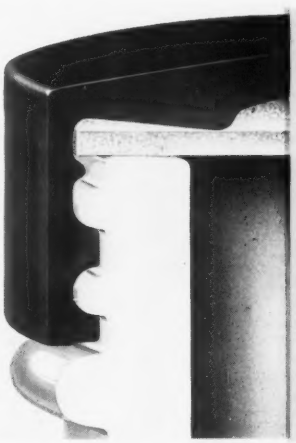
In the medium and tall styles, the thread is exactly the same length as in the other caps, enabling them to be applied with a minimum number of revolutions, and adding to their convenience for the consumer to remove and replace.

On the inside of the top of the cap where it contacts with the liner, the surface is not horizontal but slopes slightly toward the center. This *wedge top construction* increases the pressure on the liner at the point of contact with the top of the glass container, providing a tighter seal. It also forces the liner to bend slightly, putting it under tension, and offering a gradual and increasing resistance to the tightening of the cap. Its effect is also to automatically center the cap on the container. It is a feature that contributes much to the unusual sealing efficiency of Anchor Molded Caps.

Anchor Molded Caps are preferred by production men, due to their perfect adaptability to the processes of application, either by hand or machine. They are started easily because of the loose way in which they fit over the container finish before tightening. They require a minimum of turning. They seat easily, and offer gradual resistance as they are screwed home. Where the gripping surface is limited as in the bottle cap, the knurling of the design provides a secure grip for the operator's fingers or machine gripping devices.

In machine application, the general strength of the caps and the use of correct size liners are the two outstanding factors that make for smooth operation. One big advantage is that Anchor Molded Caps need not be inspected to assure the presence of the liner, even though they be tumbled about in a machine hopper. The liner retaining features take care of that.

If Anchor Molded Caps had no other advantages, their ease and speed of application alone would amply justify their adoption.



CUTAWAY VIEW OF THE ANCHOR MOLDED CAP

Just below the liner you can plainly see a projection. That is the *liner retaining ledge* — an improvement that means much in avoiding packaging difficulties as well as preventing consumer dissatisfaction.

Note also the special *construction of the cap thread* (described above), how it continues to the lower edge of the cap. This insures a firm, sure, close grip around the full 360° circumference of the jar or bottle.

The wedge top (the part of the cap in contact with the liner) presses the liner down, keeping it under tension, which adds greatly to its positive and efficient sealing. This also is described above.

Eminently practical . . .

EVERY ONE

It is the very differences in products, in product characteristics, in methods of packing and sealing that make Anchor closures eminently practical. For Anchor does not attempt to do everything with one or two types of caps. It recognizes that no single type of closure could possibly meet all the diverse needs that exist. Hence there is no temptation for Anchor to urge the adoption of any closure for a product or a package to which it may be imperfectly suited. Through the years Anchor has developed new types of closures and improved existing types to meet new conditions of packaging and to adapt new types of products to glass packing.

ANCHOR

CAP & CLOSURE CORPORATION

22 Queens Street, Long Island City, New York

★ ★ ★ BRANCH OFFICES ★ ★ ★

ATLANTA	CLEVELAND	LOS ANGELES	MONTREAL	PITTSBURGH	SEATTLE
BOSTON	DETROIT	LOUISVILLE	NEW YORK	ROCHESTER	ST. LOUIS

The Oriental Note!

ADASTRA

Vidal-Charvet

Long one of the finest of the Vidal—Charvet group, the possibilities of ADASTRA V-C as a successful perfume is emphasized by the present day popularity of the semi-Oriental note.

ADASTRA was designed particularly for use in perfume extracts and has no superior for this purpose, but is of equal value in face powders and toilet waters. It is not recommended for creams or lotions, however.

Lower costs now permit a reduction to the price quoted below. Its great strength suggests the use of less than the ordinary percentages in powders and toilet waters, placing it within the reach of all.

$32.00 per pound

Let Us Send You A Testing Sample!

UNGERER & CO.

13-15 West 20th Street

NEW YORK

Sometime ago we said in an advertisement:

"We know more about the kind of odors the public will buy than most other people do."

Don't take our word for it; prove it.

The public will buy an odor like our JALMA. It comes in several grades from $12.00 per pound up.

Lilas Véritable—for the new season, a new odor along the lines of the lilac blossom itself. Sweet and lasting—more so than you generally expect in a lilac. For perfume, No. K-19, $20.00 per lb.; for powder, No. K-20, $12.00. Lilas Véritable No. K-21, $10.00 per lb. for creams.

Send for a sample and see for yourself

van Ameringen-Haebler, Inc.

Manufacturers and Importers of

Aromatic Essentials

{ *Flavor Materials, Aromatic Chemicals Essential Oils, Perfume Specialties* }

315 FOURTH AVENUE, NEW YORK

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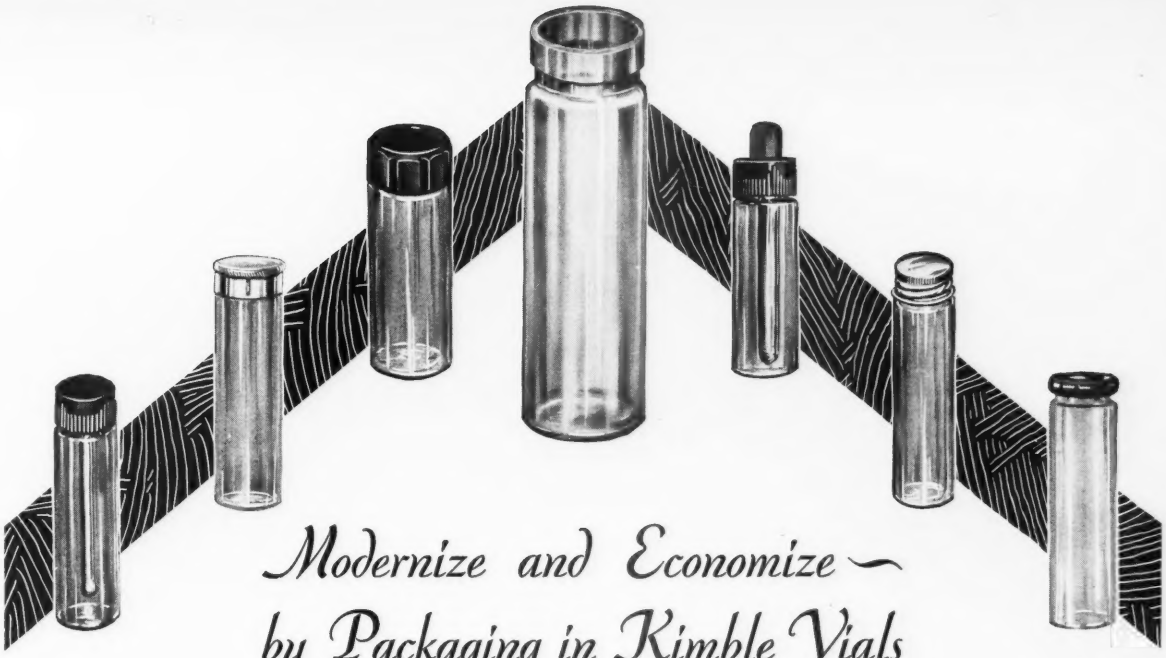

Modernize and Economize — by Packaging in Kimble Vials

Smartness is the watchword in modern selling. An attractive package that shows the product to the best advantage pays big dividends in rapid turnover and steady demand.

Why experiment with doubtful package designs when the leading drug, pharmaceutical and toiletries manufacturers are standardizing on Kimble Automatic-Machine-made Vials? These sparkling, uniform, colorfully closured small glass containers are ideal from the standpoints of easy handling, strength and durability, and lightness in weight. They have solved thousands of packaging problems, putting many an old product into the front rank of modern, sales-winning merchandise.

• • •

Consult us at once on your sampling and packaging requirements—and see how Kimble Glass can cut your production costs and stimulate profits.

KIMBLE GLASS COMPANY

VINELAND, NEW JERSEY.

NEW YORK • PHILADELPHIA • BOSTON
CHICAGO • DETROIT

ACID TANNIC U.S.P.

NUTGALLS—AS WE GET THEM—THE CAREFULLY SELECTED PRODUCT OF CHINA.

TANNIC ACID—OUR END PRODUCT—THE SPECIAL MALLINCKRODT "FLUFFY GRADE" AT LEFT—U. S. P. AT RIGHT.

In these vats in the St. Louis plant gallotannic acid is extracted from Chinese Gall Nuts—the first step in manufacturing Mallinckrodt ACID TANNIC and the other salts listed below. Mallinckrodt Tannic Acid has a considerably lower ash content than allowed by U.S.P.

It is exceptionally light in color—therefore, gives a correspondingly light colored solution.

Two forms: Powdered and Fluffy. The Fluffy grade is about ten times as bulky as the Powdered. Available in barrels and smaller containers.

Also

Acid Tannic Technical (an exceptionally good commercial grade)
Acid Gallic U.S.P. IX
Acid Gallic Technical
Acid Pyrogallic Crystals
Acid Pyrogallic Resublimed
Acid Pyrogallic Technical Lumps and Powdered

Specially manufactured for medicinal, photographic use, ink manufacturing, dyeing, etc.

Samples sent for comparison

Mallinckrodt

One of 1500 Fine Chemicals

ST. LOUIS · CHICAGO · PHILADELPHIA · NEW YORK · TORONTO · MONTREAL

Editorials

Open Season

Open season seems to have started for reputable manufacturers openly to shoot straight at the products of one another. Most striking of these moves has been the introduction by the Drug, Inc. subsidiary, Vick Chemical Company, of the Listerine type antiseptic—"Vick's Vorotone," —"A Good Antiseptic . . . at Half the Price of Other Quality Antiseptics." In seeming retaliation of this invasion of their market, Listerine immediately announced over the radio that they would send a tube of Listerine Rub free to any who would write in, thus apparently attempting to strike out aggressively at the market for Vicks VapoRub. Not to be quieted in their claims of the cheapness of their product—Pepsodent immediately announced that their antiseptic is still the cheapest since it permits of dilution, which is not the case with the Listerine type if antiseptic action is desired.

But further in reprisal, well substantiated rumors have it that Pepsodent plans to market a ten cent package of Aspirin. The rumor goes that this action was planned by Pepsodent last Fall, but the plan was dropped. Now, however, with Vick shooting at their antiseptic, Pepsodent is said to have lost any compunctions which they had about shooting at other manufacturers, and are quite happy to be able to shoot at the Drug, Inc. subsidiary, the Bayer Company.

Indications are clear that the finished product market is on the downward trend, and while the extreme extension of private brand merchandise at very low prices presaged such a movement, the newer competition between manufacturers promises to make it more certain and much more rapid.

Going Down

As further indication of the downward trend in the prices of the finished products of the industry, Bristol-Myers—a Drug, Inc., subsidiary—announces a reduction of Ingram's Shaving Cream from fifty cents to thirty-five cents per jar. This means a reduction of 30 per cent. in the price and means that Bristol-Myers now receives only $2.80 for a dozen tubes or jars, against a former price of $4.00 per dozen. Not that Bristol-Myers should not be among the first to make such voluntary reductions since the vice-president of the company was among the first to proclaim that a lower level was here when he worked very aggressively over a year ago to force advertising rates downward.

The answer advanced by an executive of the company when the question was asked why Bristol-Myers products were not reduced in price since raw materials were lower, was that a tube of Ipana or Ingram's Saving Cream was exactly the same product, while the advertising space was not, since circulation was lower. The fact that fewer advertisers in a magazine gave greater power to the same space and therefore offset the decrease in circulation seemed to make no impression.

But the lower prices of raw materials are bound to have their effect, especially when the buying public must seek lower prices for the finished goods. While we do not like to think so, we believe that the general market for a great many nationally advertised drugs and cosmetics will continue to work lower for some time ahead. It is in the class with the market for mortgage loans—it has stood out for a long time with all other values crumbling around it—it could not last forever.

Patent Puzzles

Pharmaceutical patents are a subject which makes some manufacturers stop and wonder. They can see many defects in our system of granting patents, and they wonder why some of the patents are ever granted. One manufacturer is of the opinion that the heavy influx of chemists for production and research into the industry is partly responsible for some of the foolish patents granted. It is his opinion that the skilled pharmacist performs many feats in compounding a prescription which astound the ordinary chemist who has never practised pharmacy. In fact, it is claimed, when the chemist discovers some of these tricks he immediately applies for a patent covering his discovery.

Another fact which surprised an executive of a manufacturing house who was not acquainted with patent law, was the fact that a patent was granted upon results which were obtained upon rats, while the medicine was, naturally enough, to be used upon human beings. He did not know that the fact that this medicine would cure disease in a rat was of great public benefit, and that therefore, the inventor was granted a patent which granted him a monopoly upon this product for the cure of all animals including human beings.

Patent law in this country has many surprising angles to it. Not the least surprising is the fact that prior knowledge of the subject of a patent will invalidate the patent even though this prior knowledge was kept secret. And we always thought that one of the purposes of the granting of patents was so that the information would be published for the benefit of the public.

Grocer-Pharmacist

The entrance of chain grocers into the drug business with registered pharmacists in charge of their licensed pharmacies will be no small factor in causing prices to work downward. Whether manufacturers like it or not, these stores will offer for sale to their customers such goods as they can sell, whether they be nationally advertised or not. The merchandising scheme will probably be the same as the merchandising scheme of any other outside distributor—that is, the featuring of nationally known goods at attractive prices. Following the education of the public to buying their drugs and cosmetics with their groceries, there will undoubtedly flow an unlimited supply of private brand merchandise.

But the character of reputable grocers is such that they do not attempt to substitute to any great extent on food specialties. Also they handle in a routine manner a surprisingly large percentage of nationally advertised goods with no attempt to displace them with their own merchandise. They are in many instances far better than many drug stores in this respect.

Just how the large manufacturers will handle the situation which confronts them with the entrance of the grocer into the drug business remains to be seen. Some will undoubtedly refuse to sell for a time at least, but if a real demand from this source is created, there will be very few who persist in this policy.

Vitamin Progress

About two or three years ago we thought that activity in vitamin preparations was at a high level, but now we realize that that was only the beginning. The extent to which development as well as consumption of vitamin products has spread with the past three years is amazing. The introduction of Viosterol has proven to be only the start of highly concentrated vitamin preparations. Since that time we have seen the development of Halibut Liver Oil, first introduced by Abbott and Parke Davis, and now also marketed by Mead Johnson and Squibb; we have seen the provitamin A, Carotene, incorporated in cod liver oil preparations by S. M. A.; we have seen the marked improvement in combinations of vitamins A and D with malt; we have seen numerous tablets of steadily increasing potency in vitamins A and D, as well as high potency liquid concentrates.

Now we notice that the vitamin potency of the plain cod liver oil is increasing to vitamin potencies which a few years back were unbelievable. Plain cod liver oil 1,250 units of vitamin A, and 500 units of vitamin D is now available on the market at the usual price of cod liver oil. This is undoubtedly due to the improved conditions surrounding the production of cod liver oil, and the greater knowledge now available as to how to protect its vitamin content.

Truly vitamin therapy is making remarkable progress.

Therapeutic Cosmetics

The term "Therapeutic Cosmetics" has become of increasing interest and importance to manufacturers in this industry due to the intense efforts now being made by all manufacturers to expand their markets and to make their products necessities rather than luxuries. The urge to give to many cosmetics something other than the mere property of beautifying by means of pigments is strong in those manufacturers who are active in research.

There are many cosmetic manufacturers, however, who regard with fear and trembling the possibility of having their products come under the jurisdiction of the Federal Food and Drugs Act. At the present time there is no Federal control of cosmetics, although there is always the likelihood that such regulation might be enacted. But many cosmetic manufacturers at the present time anxious to keep their labels clean of therapeutic claims, might not fear this further regulation nearly so much if they were under Federal regulation of any kind.

But regardless of those manufacturers who cross the bridge from merely beautifying agents to therapeutic cosmetics, there will be many who take the risk, some with much, and some with little success. Also there is always the direct threat from the pharmaceutical branch of the industry which will in increasing numbers encroach upon the field of cosmetics with full knowledge as to how to handle therapeutic claims.

Colored Glass

Promises held forth for the use of a grass-green glass as protection against light rays are not nearly so great as they at first appeared. This was mainly due to the fact that information released regarding this development was too sweeping in its claims. Certain limitations were disregarded, and the one type of glass was made to appear as a cure-all for all the ills to which products packaged in glass are heir.

The subject of deterioration of products in glass containers is a complicated one, and the color of the glass is only one of the factors involved. As a matter of fact one manufacturer has recently told us that while amber glass does greatly retard the destruction of Vitamin A in cod liver oil when the product is packed with air in the bottle, the color of the glass has no effect whatever if the air is eliminated and an inert gas substituted in its place. However, so strong was the effect of publication of research to the effect that amber protected cod liver oil to a greater extent than flint, that this manufacturer was forced to change to amber in order to obtain window displays of his product.

There is much information given on the subject of deterioration which fails to take into consideration all of the factors involved. The second article on the subject of green glass which we publish in this issue

corrects some of the false impressions created by the first article and gives a more accurate picture of the possibilities and limitations of this development. As time moves on, green glass will find its place. Manufacturers in this industry are well accustomed to having definite limitations follow the announcement of a product which makes almost unbelievably broad claims.

Changing Times

With the outlook for the period ahead as a time of continued intense competition from smaller houses coming into existence due to the delay of large national distributors to deflate prices on finished goods, the market for supplies to the industry takes on a somewhat different aspect. Plants of these new and smaller producers will not be yearning for much completely automatic equipment, although they will want to do things as effectively as possible, and will be in the market for equipment of the portable and flexible type.

Likewise with containers, there should be a definite rise in the sale of stock containers, and not so much business in private moulds. Likewise, the sale of containers will spread to a larger number of buyers, and producers will cease to depend so strongly upon a few large accounts.

And likewise throughout the entire list of supplies and raw materials, smaller orders and a greater number of buyers will constantly develop. Branded raw materials and advertising of them will be of far greater importance to raw material suppliers than at any time in over a decade.

Many ideas of how to sell supplies to this industry will have to be abandoned, if a high relative position is to be maintained by a supply house. Changing times have forced practically every type of business to change their methods to some extent as the conditions surrounding their customers have changed. This industry is no exception.

New and Non-Official

• • •

The Tommittee on Foodsies

After the first shock, we think we will bear up under the news that the dear old A. M. A. has withdrawn its acceptance from Kiddie Kanned Foods.

Now if they'll only get after Wheaties, Cwispies, Thinsies et al, Life, capital L and all, can go on.

• • •

Quick Henry, ...

Professor C. B. Lipman's announcement that living bacteria have been found in meteorites means that the school for preventive medicine should support development work on the rocket ship so that the offending planets may be liberally sprayed with S. T. 37, Zonite, Astringosol, Pepsodent, Listerine, Metaphen, Merthiolate, etc.

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You Great Big Beautiful Guinea Pig

The Federal Trade Commission has announced that Theo. White, trading as Theo White Company and Palace de Flores, Los Angeles, vendor of a perfume alleged to be irresistible, agrees to discontinue representing that such is irresistible and can captivate the soul or that it will enable the user to be exclusively attractive and to attract and win the love of any person desired, when such are not the facts.

• • •

The Greeks Had a Word for It

Firm A sells Firm B a certain product. Firm B, in turn sells it to Firm C. Firm A decided to try to sell Firm C and sent samples, quoting the same price and sending the same material to Firm C as to Firm B. After testing the material, Firm C sent it back saying that it was adulterated and too high in price anyhow.

Firm A is still trying to figure out (1) how Firm B can resell material purchased from them at below the purchase price and (2) how Firm B can improve upon Nature.

All we can say is that Firm B has a damn smart chemist and he must have extracted some high-priced adulterants.

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Odorana

Two news items have impressed us with the fact that in searching for new industrial uses, the aromatics manufacturers have overlooked the moonshine industry.

One item, from Atlantic City, reports that a distillery was located by the odor of mash despite the fact that the moonshiners had kept the carcasses of eight dead horses in outbuildings surrounding the distillery.

The other, from Castleton, N. Y., recounts the story of the discovery of another distillery through the taste of mash in the town's drinking water.

On behalf of our friends in the aromatic business, we invite all those engaged in what is still the illegal occupation of distilling spirituous liquors to communicate with them when confronted with odor and taste problems of this nature.

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Get Together, Boys

Ether was discovered twice the other Sunday. First Squibb did it over WEAF and then, during the program following over WJZ two hours later, Sharp & Dohme did it all over again.

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Getting Away From the Shovel

Walther Buchen says an appropriate coat of arms for American business would be a chisel rampant on a field of red ink.

Ten Years Ago

From our pages, February, 1923

At a conference with newspaper correspondents, President Harding expressed himself as favoring some kind of a narcotic control bill.

Bauer & Black, Chicago, purchased additional property near their plant at a cost of $110,000 for an extension.

Dividends of approximately $150 a month are paid on shares of the Lambert Pharmacal Co., manufacturing chemists St. Louis.

Changes in control of alcohol are urged by New York Board of Trade. Drug and Chemical Section, sends recommendations to Prohibition Commissioner—would allow use of 100 gallons in ninety days for private formulae preparations.

V. Vivaudou, Inc., New York, has declared a dividend of fifty cents per share on its common stock. Orders on hand at the end of January totaled $1,539,986 as compared with $567,479 January 31, 1922.

Cosmetic Therapy

O. Dexter Neal

R. L. Flett

Contributors:

Dr. Marston T. Bogert

Dr. Everett G. McDonough

O. Dexter Neal

Dr. R. L. Flett

Dr. William E. Morgan

Dr. Frank C. Gephart

Prof. Marston T. Bogert of Columbia University

"THERE is no good reason why cosmetics should not be so prepared as to be not merely innocuous but rather distinctly beneficial to the user. No cosmetic that is in any sense injurious can long survive, even if for a time it escapes the watchful eyes of federal, state and municipal authorities, and no reputable firm would attempt to market such a product. On the other hand, every effort should be made to develop cosmetics which shall be hygienically as beneficial as possible to the user. This can be accomplished most effectively and most expeditiously by the cooperation of chemical, pharmacological and medical experts, and is the type of research which merits the financial support of the industry for whose benefit it would be undertaken. It would seem that the Associated Manufacturers of Toilet Articles should be interested in such a program of constructive effort. It is quite likely that in the development of improved cosmetics, increasing emphasis will properly be placed upon the hygienic properties of the goods.

"At the same time, the fact must not be lost sight of that the principal appeal of such products is and always will be the extent to which they minister to personal adornment and beautification. The moment the medicinal or therapeutic properties are overemphasized, the product ceases to be regarded as a cosmetic and is classed as a drug. 'Therapeutic cosmetics' if advertised and sold primarily because of their medicinal properties, will be subject to the regulations and restrictions governing the sale and handling of all drugs. Further, the very fact that such cosmetics are bought because of their therapeutic properties, implies the need by the users for such medication and will inspire a feeling of repulsion in those who are perfectly healthy in much the same way that one naturally shrinks from too close personal contact with an individual whose circumambient odor suggests immediately the presence of communicable disease.

"In my judgment, the future development must be, as in the past, the appeal primarily to the desire for personal beautification, and the trade should supply for this purpose cosmetics which shall be hygienically distinctly valuable."

Dr. Everett G. McDonough of Marinello Corporation

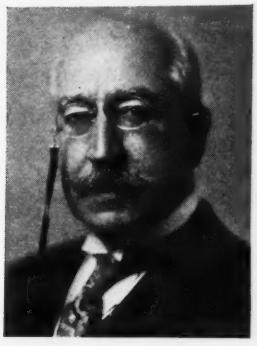
"I BELIEVE there is a trend to provide a sound scientific basis for cosmetic products, but the work of the well established and reputable houses of the trade is being obscured in the eyes of the public and Federal government by the fantastic claims made for the flood of cheap *and imitative* cosmetics.

"According to my interpretation of Therapeutic Cosmetics, the development of this branch of cos-

— A Symposium

Should cosmetics be developed to the point of having therapeutic merit? Such a move would bring cosmetics under the Federal Food and Drug Act. Or should cosmetic manufacturers stick merely to beautifying agents at a time when expanding markets are required and pharmaceutical manufacturers are turning to cosmetics? Read the divergent views.

Dr. Everett G. McDonough



Dr. Marston T. Bogert

metics is not a trend. It is an actuality. I believe it would be more appropriate if we would substitute the word 'improvement' for 'development'.

"There is a trend towards the development of pharmaceuticals in the cosmetic trade. Here, I believe in the trade's only means of expanding its field. Just as some of the better known drug houses have invaded the field of cosmetics, so will the cosmetic houses reciprocate. On the other hand, we should realize that ours is an uphill battle. We have not the recognized scientific background, nor do we possess to the same degree, the public's or the physician's confidence.

"It is with these deficiencies predominantly fixed in my mind that I have briefly outlined some suggestions, which, I believe, will do much to gain scientific recognition and public confidence.

"Cosmetic as defined by the dictionary is a preparation used to improve the appearance of the skin. This is rather a general definition and can be broken down into two specific interpretations, depending upon how the appearance of the skin is improved. First, a product improving the appearance of the skin by artificially hiding defects and enhancing the natural beauty. Second, a product improving the appearance of the skin by improving the skin itself. The first is temporary and artificial, the second is more or less permanent and natural.

"With the first, products such as lipsticks, rouges, face powders, etc., there is no great adverse criticism or opposition. In fact, history has been made, and will continue to be made, by the use of these beautifiers. They are the accompanying signs of advanced civilization. Today even the health authorities recognize their psycological merit.

"But to continue to bask in the light of such widespread approval should we not do everything that we can to be worthy of this sanction? One of the things we can do is to modify our definition in this manner: A product improving the appearance of the skin *without injury to the skin.* With the acceptance of such a modifying phrase, and the subsequent recognition of this new requisite in a cosmetic, we would always be assured of continued public approval and use.

"In the second interpretation of how a cosmetic might improve an appearance of the skin, we are approaching quite close, and in some cases even invading, the field of dermatology.

"There is a definite need for this group of products. No one will question the necessity for soap, tooth paste; yet their sole purpose is not to beautify. So why should we not include with them such products as cleansing creams, lubricating creams, astringent creams, stimulating and astringent lotions, etc. They will certainly serve as preventatives and corrective preparations for such influences as neglect, weathering, ill health, and ageing. In that sentence you almost have the limitations of Therapeutic Cosmetics. It should be modified still further by adding, insofar as these

(Continued on page 117)

Storm Warnings for Sales Managers

Entrance of grocery retailers into the field of drugs and cosmetics is only one of the warnings of the new conditions which sales managers are daily being forced to face. The trend is definite and the method of meeting it is clear.

Cross currents in distribution continue to embarass manufacturers in the industry. the latest trouble that is rapidly becoming acute is the determination of grocery stores, particularly in Southern Texas, to distribute drugs and cosmetics. Some retail grocers have gone so far as to employ registered pharmacists and have obtained state licenses as pharmacies. In these cases they are able to sell all medicinal products, while without these licenses they might be restricted from selling those products which the public goes to the drug store most frequently to obtain.

The question naturally has arisen as to just how the reputable manufacturers vitally interested in legitimate distributors of their goods are going to base a refusal to sell the grocers. Certainly a reason is difficult to find when the grocer has a license as a pharmacist. Most of these manufacturers have a policy of long standing to sell licensed pharmacies and none other. True it is that in some instances they have refused to sell stores registered as pharmacies when these stores have been consistent price-cutters, but generally this policy has been maintained.

It seems that it is hardly up to the manufacturer to choose among registered pharmacists. He can refuse to sell plain grocery stores; he can refuse to sell cigar stores; he can refuse to sell department stores; but he is faced with a different problem when any of these types of stores are actually licensed under the state laws as pharmacies. It certainly seems that it is strictly up to organized pharmacy which is largely responsible for the state laws to determine which types of stores are to be licensed as pharmacies. The manufacturers are vitally interested in maintaining legitimate drug stores as distributors of their products, and doubtless have always been willing to aid the drug stores in protection of their market both morally and financially. But the manufacturers can not play too strong a part in organized pharmacy both from their own point of view as well as from the point of view of the pharmacists themselves.

There are those who believe that the drug stores have to a large extent invited the competition of the grocery stores. Many food items have long been sold through the stores although these products have had no possible connection with a drug store in the strict sense. Coffee is an item in point. The fourth largest selling brand of coffee in the country is the product of a drug manufacturer and is sold exclusively through the drug stores which have the agency for the drug products of this manufacturer. Likewise has this same manufacturer offered grape-juice and other grocery store products through its agencies as particularly attractive prices on special deals. As a matter of fact the drug store has encroached upon the domains of many types of retailers, for some reason feeling that it enjoyed some sort of prerogative in this invasion.

There are some drug stores in Texas which have held the grocery chains in check. In Dallas it is stated that the owner of a chain of stores threatened reprisals against the grocery chains if they should attempt to enter the drug field. This threat was to the effect that the drug chain would immediately enter into the sale of meats at retail, telling the grocer that since he made his money at the meat counter, that is the point at which the drug chain would aim. He stated that he would have cuts of meat ready cut and wrapped and sell them at little or no profit. The grocery chain immediately saw the point and stayed out of the drug business. The grocery chain knew that here was a man who knew how to fight back at them, and they had no desire to enter the drug business in they were going to endanger the profits from their legitimate business by so doing.

But the situation is typical of the trend in practically all retail lines today. In an effort to hold volume and profits from falling off to the point at which serious losses might be sustained, retail outlets have extended their lines to include everything for which they might possibly have a demand. Thus the cigar stores long ago became distributors of more or less importance to

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Is the Skin Penetrable?*

Many medicinal and cosmetic preparations base their claims to merit upon the assumption that the skin is penetrable. There are arguments on both sides, we should like to hear from the affirmative.

By Dr. William Brady

THERE is the common belief that certain medicines, foods, poisons or substances of unknown composition may be absorbed into the body through the unbroken skin under some circumstances. This notion is not only held by many physicians today but is stoutly upheld by good medical authorities.

Four or five years ago some one cited in refutation of our teaching that the unbroken skin is quite impervious, the writings of Dr. Bernard Fantus. Dr. Fantus is one of our acknowledged medical authorities and at that time he still taught that "fatty substances favor penetration . . . partly because they are mixable with the fatty secretion of the sebaceous glands through which a certain degree of absorption is possible. Friction, by forcing material into the sebaceous ducts, obviously favors penetration." (The Tecnic of Medication," published by the American Medical Association.)

Dr. Fantus says friction, that is, rubbing, "obviously" favors penetration of the skin by the substance. Scientific tests, however, fail to give any evidence that substances so applied penetrate farther than the mouths or openings of the sebaceous ducts. How many such negative experiments must be made before Dr. Fantus will concede that penetration is not so obvious as physicians have long believed?

In the Old Days

From away back in the infancy of scientific medicine physicians have used inunctions of mercury ointment or salve as a method of treatment for syphillis. In the beginning we assumed that the mercury thus applied penetrated through the skin and was absorbed into the body. We thought this was quite obvious, for patients thus treated showed the systemic effects of mercury absorbed, and sometimes, indeed, they suffered mild mercurial poisoning from absorbing too much mercury.

Then a few critical observers noticed that if an excess of the ointment was left on the skin, without any "rubbing in" at all, the patient showed the systemic effects of the absorption of mercury just as surely as though much time were devoted to "rubbing it in."

Next good physicians observed that a more pronounced mercurial effect was obtained from inunctions among the unwashed than among more cleanly classes. From this some of the doctors concluded that more mercury is absorbed through the skin if the mercury ointment is not too quickly washed off after the inunction, or if the patient does not mind wearing the same shirt for a week or two, the shirt being more or less impregnated or saturated with the mercury ointment. But other physicians drew a different conclusion. They thought that perhaps a certain amount of the mercury might be volatilized or vaporized by the warmth of the body, and inhaled by the patient whose skin or clothing was soiled with the salve.

Finally a number of cases of acute mild mercury poisoning were reported, where individuals applied mercury salve ("blue ointment") freely to the skin for the purpose of destroying lice, then retired to bed and slept with the head and all covered, thus breathing all night air more or less impregnated with mercury volatilized by the heat of the body.

In recent years the administration of mercury by inunction (rubbing mercury ointment on the skin) has been almost wholly discarded by the medical profession, for various reasons but chiefly because we know it is an uncertain and crude method. I think it is fair to say that most physicians at the present time recognize that any systematic effects of mercury applied to the skin are produced by the absorption of the volatilized mercury through inhalation.

Dr. Carl G. Zwick, Cincinnati skin specialist, carried out a careful investigation of the question of the absorption of mercury through the skin. His reports are on record and any physician may study them. Briefly, he found that no matter how carefully the inunctions of mercury ointment are given it is impossible to detect any mercury in or under the skin, but only in the mouths of the sebaceous ducts.

There are on record rare cases in which deposits of metallic mercury have been discovered in the living tissues, but these anomalous cases are of questionable significance, for the mercury may have penetrated through an open wound or abrasion.

*Reprinted from "Brooklyn Daily Eagle"

Prof. Fantus or other good medical authorities to the contrary notwithstanding, it seems to me that we can logically arrive at but one conclusion in respect to the permeability of the normal skin, and that is the teaching I have upheld here, namely, that nothing can be absorbed through the unbroken skin.

Although I am always ready to subject my own skin to any reasonable test of this teaching, under the observation and control of qualified scientific students, I beg that wiseacres and even obscure healers or nostrum makers refrain from anonymous advice as to what I should apply to my skin. If you are prepared to back up your opinion or notion about the matter, why should I take your suggestion seriously?

Here's A Bet, You Skeptics

On the other hand, I wonder if anybody who thinks certain things are absorbed through the skin would be willing to back his belief to the extent of a contribution to the charitable or educational purpose I designate if my skin fails to absorb the stuff applied as he directs. I'm willing to risk my health or life against anybody's $5,000, on such a test of the question of skin absorption, and I don't care what poison or substance is used in the experiment, provided it does not burn or blister or scratch an opening through my skin.

To read the letters I get about this, one would suppose there are a lot of people who are confident that the not infrequent cases of poisoning by shoe dye are proof that that poison is absorbed through the skin of the feet, and they quote various coroners or physicians as explaining that the poisonous ingredient of the shoe dye (nitro benzol) is absorbed through the feet. All right, make it shoe dye and apply it to my feet just as you please—for any length of time you please, provided that my air supply shall be entirely free from any nitro benzol or other poison.

In conclusion I beg that the sophomores spare me the onus of explaining why I recommended such external applications as iodin, liniment, mustard plaster, poultice or salve if the skin doesn't absorb anything. It would be just too bad for the patient if the skin did absorb these things.

Industry's Books

100,000,000 Guinea Pigs, by Arthur Kallett and F. J. Schlink, 312 pages, Vanguard Press, New York, $2.00 net.

Following in the footsteps of "Your Money's Worth" and "The Degradation of Science," this volume is sort of a combination of the two, without, however, retaining the best features of each. But an extremely clever title and sensational advertising should make it a better seller than either of the previously mentioned works, and every manufacturer in this industry should read the book so that he may be familiar with the charges which have been made against the industry.

The book consists wholly of destructive criticism, with the profit system being blamed and nothing of constructive nature being offered in its place. The criticism, itself, is so determined to be as devastating as possible, that errors of fact are numerous enough to awaken many doubts as to the infalibility of the author's fact-finding agency. A book which calls saccharine a poison and 15 out of 17 cod liver oil concentrates mislabeled as to potency cannot expect to be accepted at its face value. And when it intimates that the Food and Drug Administration is in cahoots with the manufacturer, it misses the mark completely as anyone knows who has ever had anything to do with it.

Perfumes, Cosmetics and Soaps, by William A. Poucher, vol. 2, 600 pages, D. Van Nostrand Co., Inc., New York, $9.00 net.

The present volume is the fourth edition. While it follows the arrangement of its predecessor, there are two new flower monographs, and a review of Continental practice. The cracking of soaps is more fully treated and a wider range of raw materials given. There is also a new chapter dealing with fruit flavors which considerably widens the appeal of this work.

The section devoted to cosmetics has been considerably revised in the light of modern research and includes many interesting developments, including cholesterin preparations. Also included in this edition is a cosmetic color chart.

There is not much which can be added which is not already known about this book. It should be, and in most cases is, considered indispensable by cosmetic manufacturers.

The Terpenes, by J. L. Simonsen, vol. 2, 627 pages, The Macmillan Co., New York, $7.00 net.

The terpenes, particularly the dicyclic and sesqui-terpenes described in this volume, have even greater significance than is generally realized. Not only are they the bases of the important aromatics and essential oils, but recently relationships have been traced between them and many important biochemical products. Thus a knowledge of complicated terpene chemistry is more than ever indispensable to investigators in chemical fields apparently unrelated to essential oils and perfume materials.

However, the literature on the subject is enormous, and Dr. J. L. Simonsen has performed a valuable service in making a compilation which critically considers virtually every important contribution made. In addition, the author has presented the material in such a way as to give a well-rounded picture of the state of knowledge in the sections he considers.

Each subdivision is headed by a reproduction of the structural formula of the compound to be described. A brief description of its natural occurrence and physical properties precedes a clear exposition of proof for the structure. Syntheses further proving structure and extended descriptions of derivatives and peculiar reactions (there are many of the latter in terpene chemistry) complete the picture. All are presented as lucidly as an involved subject permits, by a man of extensive experience in, and knowledge of the field.

In part I, devoted to dicyclic terpenes, each chapter is partitioned into sections covering hydrocarbons, alcohols, aldehydes and ketones. These chapters are, respectively, Thujane, Carane, Pinane, Santene, Camphane and isoCamphane, Fenchane and isoBornylane. The division on Camphor, in the fifth chapter, covers 120 pages. Part II, describing sesquiterpenes, is divided somewhat differently, but no less logically. The first chapter, Hydrocarbons, has separate divisions for Monocyclic, Dicyclic and Tricyclic Hydrocarbons. Chapter II, Alchools, is concerned with two Acyclic Alcohols, Farnesol and Nerolidol, in its first section, with the Cadalene alcohol in the second, Eudalene Alcohols in the third and Alcohols of unknown constitution in the fourth. Chapter III describes an Aldehyde, Nortricycloekasantalal, while the concluding chapter is concerned with the two ketones, Doremone and Santalone.

Cosmetic Therapy

(*Continued from page 113*)

influences are reflected in the change of the appearance of the skin from normality and there are no skin lesions present. Perhaps this is a severe limitation, but it is a just one, not only for the consumer but also for the producer.

"It is true that many of us have even entered the dermatologist's field with our pharmaceutical preparations. In every case of these types, the prospective user should be advised to see a competent physician and if he so advises, use may be made of the product. Cooperative actions will do much to establish understanding and confidence.

"The medical profession has, in many cases, already shown its willingness to cooperate with reputable cosmetic houses. It is my impression that where skin blemishes characterize an internal disorder, the physician welcomes a treatment for the effect while he is removing the cause.

"To succeed and to expand the field of Therapeutic Cosmetics, and to develop pharmaceuticals, we must have the approval of the medical profession. To warrant the approval of this profession, whose records show a more disinterested public service than any other professional group, the cosmetic industry must keep the standard and quality of its preparations at a very high level. This can be done by research work, preliminary testing, and rigid control methods.

"Perhaps the real weak spot at the foundation of the cosmetic industry is the lack of co-ordinated research. Read any journal in any language and you will find few articles on cosmetics, and they will be of doubtful value. Yet our industry is one of the largest.

"Another weak spot is the lack of any general control to guarantee the quality of cosmetics. The high standard demanded by some manufacturers only partially offsets the great number of preparations that are literally dumped onto the market without any preliminary research or testing. We are all well aware of the typical manner by which a great many products enter the market. The 'secret' formula is obtained either from a pharmacist's handbook or is given by a raw material or essential oil salesman, who hopes to be repaid with orders for his materials. Then, with testimonials bearing the name of a popular movie, opera or stage star the product is placed on the market. There is no preliminary research work to determine the efficacy of the product. No tests are made to find out whether the product will be harmful. With great ballyhoo and exaggerated claims of a new discovery, it is 'given' to the public.

"Exaggerated advertising claims will have to cease. The use of popularized medical words for sales appeal is one of the worst offenses the cosmetic industry is indulging in at the present. The two words in vogue now are: 'Vitamin' and 'Hormone.'

"In food chemistry and also in physiological chemistry, tremendous advances have been made in the study of the vitamins, but in dermatological chemistry there has not, to my knowledge, been any meritorious work done relative to the effect of vitamins upon the skin. Just because there is a structural relation between Vitamin 'D' and one of the constituents of some cream's ingredient, and Vitamin 'A' and one of our well-known synthetic perfume compounds, (it is doubtful if those using this term, or self-made derivatives of it, are even aware of this), is no reason why such undiscriminating use should be made of a word which is gradually losing the potency of its useful appeal by a lot of unhealthy advertising.

"The Hormone complex is quite pronounced today. The partial publicizing of the medical knowledge concerning the amazing actions of the secretions of the endocrine glands was avidly received by certain cosmetic houses. (It is a pity that it was not just limited to this one industry.) Overnight, creams containing the wonderful skin rejuvenating Hormone flooded the market.

"The two most widely studied hormones are Adrenalin and Thyroxine, and even with all its knowledge concerning them, the medical profession cautions that the promiscuous use of either of these two hormones is a dangerous practice, and even with a physician's administration, utmost care should be taken. No wonder the doctor looks askance at a hormone cream.

"Antiseptic is another popularized medical word with definite sales appeal. Its wide use has forced the Food and Drug Administration to define this term; yet the very low standard required is going to cause the word itself to lose, eventually, its scientific appeal.

"Another practice which will ultimately prove to be a boomerang is the allowance of advertisements which over-estimate the ability of their product. It is not necessary to go into details, we are all familiar with the cure-alls, the superlative adjectives, and the over-exaggerated claims. Even the labeling of the products themselves are open to questions, and in some cases they are outright prevarications.

"But in spite of all these adverse policies, the cosmetic industry continues to grow, the reason being that there is an insistent demand and a definite need for cosmetics. It is up to the industry to see that the demands are satisfied and the need is met with products of merit."

O. Dexter Neal of Primrose House

"COSMETIC products and pharmaceutical products are closely related. As science progresses, as new products with therapeutic properties are discovered, as we find out more and more about the living cells of the body and their reaction toward the various chemicals, this relationship becomes closer.

"The cosmetic chemist today, is consulting the dermatologist and the latter, in turn, is becoming more interested in cosmetics. There is a common problem

between these two which warrants a closer relation than now exists.

"It is true the cosmetic chemist must formulate some of his products with no therapeutic value, but for beautification only, yet there are some which must be considered from both viewpoints. Regardless as to therapeutic value of a preparation, it is paramount that it has no detrimental effect when used. This factor is properly taken care of by all reliable cosmetic manufacturers. However, this fact is not as generally known as it should be. It is true that many of the medical profession believe lead, arsenic and mercury compounds are common ingredients of many cosmetics. The care which most cosmetic firms take to guard against any toxic or other than beneficial products needs more publicity than it has received, especially among the medical profession.

"This will have the tendency to create a better reaction toward cosmetic products with therapeutic properties.

"Many cosmetic firms now market products with therapeutic properties and this trend will increase. The cosmetic field is a separate field and will so remain with these products being included in it.

"Cosmetic firms should be on their guard as to making unwarranted claims for their products just for the sake of sales. Such claims result in temporary sales, dissatisfied customers and the general ill will of the public including the medical profession."

Dr. R. L. Flett
of American Products Company

"IN ADDITION to the beautifying properties of cosmetics, reputable manufacturers are increasingly successful in adding therapeutic virtues to their products. Although the mitigation and cure of disease should logically rest in the hands of the skilled physician, there are those manufacturers with trained staffs of chemists, biologists and others who are devoting their time to these subjects, and as a direct result are constantly developing combinations in toilet preparations whose therapeutic value cannot be questioned.

"There are many items that cannot be definitely classified either as a cosmetic, a pharmaceutical, a corrective or a medicine. Their overlapping properties prevent this. An example of this may be a foot powder. In this instance a preparation can be made, and should be made, that will prevent the recurrence of 'Athlete's Foot,' materially assist in its cure and at the same time be a corrective for ill-smelling feet, as well as give a feeling of comfort and ease. Hence it is an overlapping cosmetic, pharmaceutical, and corrective. Many (or most) of the remedies used today by competent physicians are the direct results of this type of activity in the laboratories of manufacturers of cosmetics and toilet preparations.

"There is a sad situation confronting us today in that both the Federal Government as well as the American Medical Society and many others have seen fit to obscure very laudable results of this nature in the eyes of the public by giving undue publicity to certain worthless cosmetics, with the inference that all cosmetics and toilet preparations are fakes. This is certainly not so and is both unfair and regrettable and can be justified only by selfish motives.

"In spite of this, our research work shall continue, constantly improving preparations as discoveries are made, and I believe that time will prove that many cosmetics as they are today will be altered to include therapeutical properties now non-existent or minor ones.

"We all know that (generally speaking) teeth are in better condition today as the direct result of the activities of tooth paste manufacturers as well as tooth brush manufacturers. We all know that skin is in better condition today, thanks to the soap, skin cream manufacturers and others. This list can be extended almost indefinitely, so that there has been a constantly increased proportion of cleaner, more beautiful, healthier, and more comfortable men and women due directly to the research and scientific work done in the laboratories of manufacturing cosmeticians."

William E. Morgan
of Inecto, Inc.

"I BELIEVE the suggested trend toward combining therapeutics with cosmetics is fraught with peril and injury for the legitimate cosmetic trade.

"As I see it, therapeutics and cosmetics are properly distinct spheres. The province of therapeutics is the correction of defects or disorders of health, that of cosmetics, the correction of defects or disorders of appearance. Only insofar as appearances affect our self-respect, or social and economic standing, and thus *indirectly* our happiness, and state of mind, or body, may cosmetics legitimately claim to benefit the user, in the matter of health. With therapeutics, on the other hand, the influence on health is *direct* and immediate, and the influence on appearance, social and economic standing etc. *indirect*.

"It seems to me that the proper path to the rehabilitation of cosmetic advertising and salesmanship in the eyes of the public and of governmental agencies, consists in recognizing always the clean cut distinction above described between cosmetics and therapeutics. If claims have been fantastic, the restoration of confidence must be based by self-respecting firms on absolute truthfulness, not on an increased confounding of terms and viewpoints.

"I need hardly point out that reputable houses of the trade will not make unwarranted or wishfully anticipatory claims of therapeutic potency for products of merely cosmetic character, in advance of the completion of the scientific studies necessary to support such claims. Research is undoubtedly continuous in

(*Continued on page 160*)

What's New in Medicines

Composition of medicines produced in foreign countries indicates the components for the latest remedies offered for various ailments.

Airodyn—Contains acidum acetysalicyicum and dimethylaminophenyldimethylpyrazolon as well as lactylphenetidine, acetyl-para-phenetidine and caffein. Tablets. For alleviating pain. Chupha G.m.b.H., Nuernberg, Germany.

Albertistine—Paste containing specially prepared silicic acid, glycerin, boric acid, salicylic acid, iodine and essential oils. For alleviating pain caused by inflammation. Chemische Werke vormals H. & E. Albert, Wiesbaden, Germany.

Angiolysin Diwag—Each tablet contains 0.012 gram adenosin phosphate in nucleotides and 0.125 gram of pyrrhodid (dimethylaminophenyldimethylpyrazolone sulphocyanide). Adenosin-phosphate is biological substance, which exerts selective coronary indurating action. Pyrrhodid swells or hydrates colloidal tissue and has analgesic and spasmolytic properties. For angina pectoris, coronary sclerosis, cardiac asthma. Dose 1 to 2 tablets three times daily; 3 tablets in attacks. Chemische Fabriken Dr. Joachin Wiernik & Co., A. G., Berlin-Waidmannslust, Germany.

Apicosan N—Contains special form of bee poison. For neutritis trigeminus neuralgia, sciatica, true, essential migraine, chronic and non-infectious muscular rheumatism. Dr. August Wolf, Bielefeld, Germany.

Aronit Balsam—Contains essential oils, menthol phenylquinolin, methylsal and-cholesterin-containing salve base. For gout, rheumatism, sciatica, etc. Privilegierte Apotheke Bad Blankenburg, Germany.

Aronit Coated Pills—Contains formic acid, lithium, amidopyrin, phenylquinolin, quinine, arctostaphylos and cascara sagrada. For ills from uric acid, gout, rheumatism, sciatica, etc. Privilegierte Apotheke Bad Blankenburg, Germany.

Arsenosol Bath—Contains compounds of best known type found in natural arsenic baths. For anaemia, nerve troubles, skin diseases, general weakened condition. Novopin Fabrik Pharmacosma G.m.b.H., Berlin-Johannisthal, Germany.

Arteriosal—Tablets containing chlorophyll compound, ground stinging neetle leaves, cocoa, lactose. For conditions brought about by ageing, varicose veins etc. Apotheker Max Wagner, Leipzig, Germany.

Arthen—Gelatinized pills containing extracts of garlic, equisetum, viscium and crataegus. For stomachic and intestinal troubles, arteriosclerosis. Fabrik Pharmazeutische Praeparate Karl Englehardt, Frankfurt-am-Main.

Biological Nutrient Salt (A. Scholta)—Contains most active salts of seawater in homeopathic dilution. For diseases of thyroid gland, liver, glands of mucous membranes and other rejuvenating organs, high blood pressure, hardening of arteries, gout, rheumatism, goiter, etc. Gebeka Fabrik Chemisch-Pharmazeutische Praeparate, Weinboehla-Dresden, Germany.

Calciumbromatyl—Good-tasting fluid containing 10% calcium bromate. For nervous irritations. Dr. Beyrich & Co., G.m.b.H., Neugreussing bei Doebeln Sa., Germany.

Calciumchloratyl—Syrup containing 1 to 6% calcium chlorate. In calcium therapy. Maker as above.

Contralgin Paste—Contains 2% pantocaine; also as disinfectant solbrol, a colorless, odorless and tasteless antiseptic. Base used in making paste is free from fats and is easily resorbable. Possesses complete adherence to mucous membrane, so that long-lasting anaesthesia of mucous membrane is assured. In dentistry for anaesthesizing and disinfecting sound, inflammed and injured parts of mucous membrane of mouth so that infection is avoiding in fixing plates, in extraction of milk teeth, removing tartar from enamel, etc., and for combating dolor post extractionem. I. G. Farbenindustrie A.G., Leverkusen, Germany.

Cupraemon—Composition of pills is 0.044 gram iron as ferrous chloride (0.1 gram), 0.0025 gram of copper in liver extract and 0.1 gram ventraemon. Gesellschaft Wissenschaftlichen Organpraeparate A.G., Berlin-Spandau, Germany.

Domal Suppositories—Contains extract of flowering tops of sage, adeps lanae petrolatum, boric acid, rose water, Peru balsam and cocoa butter. Bombastus Werke Freital Zuckerode bei Dresden, Germany.

Eucatol Face Dew—Contains substances that aid in skin growth with carefully compounded and propor-

tioned addition of weak alcohol solution, containing disinfecting and aromatic substances. Preparation is adjusted to biological acidity of skin. Chemische Fabrik Promonta G.m.b.H., Hamburg, Germany.

Fluosan—Terpene condensate of following formula:—$R_1.R_2.COOLi$. For local percutaneous treatment of rheumatism, gout and neuralgic troubles. Has great diffusability through semipervious walls and is easily hydrolyzed. Chemische Fabrik Dr. Ch. Thaler, Vienna, Austria.

Pankreon Pills—In coated form. Pancreas enzyme preparation. Contain 85 parts dry pancreatic substance, 3 parts tannin, 12 parts inorganic and organic stabilizers. Made in form as not to be attacked by acid of gastric juice. In this form contain lipolytic, tryptic and amylolytic (diastatic) enzymes of pancreas. Used in substitution for fermentation therapy, in asthenia (debility), anaemia, anorexia, achylia gastrica, chronic gastritis, intestinal dypspetic fermentation, basedowic digestion disturbances, nutritional troubles in small children, diabetic intestinal disturbances, dermatoses. Rhenania Pharmazeutische Abt. der Kali Chemie A.G., Berlin, Germany.

Pankrevital—Diabetic preparation, containing sodium phosphate, calcium glycerinophosphate, calciumlactate, sodium sulfide, pankreon, magnesium phosphate in homeopathic dilution; also syzygium jambolana (rose apple), taraxacum, sodium choleinate, phaseolum, and uranium nitrate. Apotheker Franz Konizek, Oberhausen in Rheinland, Germany.

Paractol—Amino-acid prepared from sugar beet, which splits off hydrochloric acid. Called physiological acid water for treating stomach; acid lemonade. Single dose of 3 grams corresponds to ten drops of dilute hydrochloric acid (German Pharmacopoeia). For stimulating appetite, aidiing digestion; good tasting acid preparation in sub-acidity. Chemische Pharmazeutische A.G. Bad Homburg, Frankfurt-am-Main, Germany.

Paratropin—Combination of atropine, papaverin and calcium benzyl-phthalate. For spasmodic and convulsive phenomena of all sorts in various organs with smooth muscular structure, for example in convulsions in stomach intestinal canal, gall passages, urinogenital tract, bronchial tubes, and vascular structure. Dr. Ernst Silten, Berlin, Germany.

Plantagin Zeltchen Bad Reichenhall—Contains plantagin and codeine phosphate. Treating bronchial convulsive coughing and irritations caused by coughing. Asthmosana Rudolf M. Mayer Bad Reichenhall, Bavaria.

Radium Emanosan—Contains sodium phosphate, sodium sulfide, sodium carbonate, calcium glycerinophosphate, magnesium phosphate, silicic acid, sodium chloride and percolate obtained from herba equisetum (horsetail), herba galeops., fucus vesiculosus (bladderwrock), drosera (sundew) and radium solution of 600 Mache units strength per 100 tablets. For hardening veins. Hormo Pharma G.m.b.H., Berlin, Germany.

Schock Calorose—Ampules containing 300 cc. of 40% sterile solution of invert sugar for intravenous injection in traumatic or toxic vascular stock. Chemische Fabrik Guestrow.

Sedocalcium—Combination of equimolecular weights of calcium bromide and calcium lactate in double salt combination of following formula: $CaBr_2.Ca(C_3H_5O_3)_2$. Reliable action as sedative and hypnotic. Novopin Fabrik Berlin-Johannisthal, Germany.

Sedocalcium Compound—Specific sexual sedative. Combination of sedocalcium and monobrominated camphor. For gonorrhoea to avoid painful erection of penis; preventing adnex disturbances, hyper-eroticism, onamia, pollution. Novopin Fabrik Berlin-Johannisthal, Germany.

Temoebilin—Contains all soluble active constituents of curcuma domestica (curry in natural combination and with ingredients in standardized proportion besides fluid extract of chamomile, folia menthae (mint leaves), and fructus carvi (caraway seed). Used as cholagogue in subacute and chronic diseases of gall bladder with or without formation of gravel, catarrhal jaundice as well as in after-treatment in gall bladder operations. Chemische Pharmazeutische A.G. Bad Homburg, Germany.

Tyronorman—Thyroid prophylactic. Contains atibodies usually found in blood acting against hormone of thyroid gland in highly purified concentration. Its administration is based on principle of substitution therapy as in use of insulin. One tablet contains 10 antithyreoidal units. For morbus basedowii, and threotoxicoses; furthermore for preliminary treatment and after-treatment in Basedow operations, Saechsisches Serumwerk A.G., Dresden, Germany.

Liquide de Menciere—Contains 75 grams tincture of quillaia bark, 2.5 grams saponin, 2.50 grams iodoform, 10 grams guaiacol, 10 grams eucalyptol, 10 grams balsam peru, and 100 cc. water. Used pure or diluted with 9 parts of water. Bulletin Ch. Synd. Pharmacie de la Seine, September 1932.

Anti-Grippe Tablets—Contain 250 grams acetylsalicylic acid, 150 grams pulverized ipecac opiat., 100 grams camphor, 50 grams amyl tritic., 40 grams talc, 6 grams pulverized agar-agar and 90% alcohol as required. Jahresber. des Chem. Staatsblab. in Bandoeng through Farmac. Tidende and Apotheker Zeitung.

Myridiasine—Contains 0.02 gram atropine sulfate, 0.02 gram duboisine sulfate, 0.01 gram scopolamine hydrobromide, 0.15 gram coaine hydrochloride, 5 grams petrolatum and 5 grams lanolin-petrolatum. Bulletin de la Ch. Syndicale des Pharm. de la Seine, February 1932.

Hepatosodine—Contains 5.00 grams hexamethylenetetramine, 23.75 grams sodium phosphate, 15.75 grams

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sodium sulfate, 7.90 grams sodium citrate, 7.90 grams sodium benzoate and 39.70 grams sodium bicarbonate. Bulletin de la Ch. Syndicale des Pharm. de la Seine, February 1932.

Halyl—Contains 4 grams balsam peru, 15 grams tincture of eucalyptus, 2 grams menthol, 15 grams tincture of benzoin, one gram tar and sufficient alcohol, 90% up to 100cc. Used as inhalant. P. Ciateau, Paris, France.

Sinusyl—Contains 15 grams myrtle oil, 4.50 grams of camphor, various vegetable essences and oils up to 1,000 cc. as desired and 3 grams resorcinol. For nasal inhalation and spraying. P. Chateau, Paris, France.

Tonifene—Contains stabilized 50 grams fluid extract cola nuts, 50 grams fluid extract of fenugreek, 2 grams disodium methylarsinate, 5 grams fluid extract of guarana, 5 grams fluid extract of osier, 25 grams tincture of Saint Ignatius' bean, one gram manganese sulfate, 15 grams phosphoric acid and enough excipient, as desired, to 1,000 cc. Tonic, energetic, antiasthamtic. Dumesny, Paris, France.

Blum—Contains 5 grams of sulfur, 5 grams glycerin, 10 grams camphorated alcohol and 80 grams distilled water. For local applications.

Gastrodenin—Contains special mixture of decoctions, infusions and extracts of taraxacum officinale, achillea millefolium, salvia officinalis (sage), sanicula europaea, arnica montana, cardamomum seed, artemesia absinthium (wormwood), humulus lupulus (hops) and erythraea centaurium. Treating ulcus duodeni and ulcus ventriculi. Hch. Reckeweg, Herford, Germany.

Gynarcopan—Suppositories for easing childbirth. Prepared in two strengths, No. 1. contains 0.5 gram quinine hydrochloride, 0.015 gram narcaricin, 0.02 gram ethylmorphine hydrochloride, 0.02 gram papaverin, 0.0003 gram of scopolamine hydrobromide, 0.3 gram diethylbarbituric acid, 0.3 gram dimethylaminophenyldimethylpyrazolone, 0.1 gram bismuth oxide and cocoa butter. No. 2 contains 0.3 gram quinine hydrochloride, 0.0005 gram of scopolamine hydrobromide, 0.15 gram of dimethylaminophenyldimethyl-pyrazolone and 0.05 gram of ethylmorphine hydrochloride. Narcaricin is chemical compound formed between agaric acid and weak morphine derivatives. Preparation number 1 excites uterine contraction and promotes partruition and soothes pain, while second preparation acts in reverse order. Chemische-Pharmazeutische Laboratorium Dr. H. Thiemann, Luesen a.d.Lippe.

Babormenth—Contains boric acid, menthol, paraffin wax mixed with suprarenine and novocaine in certain cases. Laboratorium Dr. Lindner, Karlsruhe, Germany.

Heimfried Coated Pills for Asthma—Contain calcium and bromine compounds, ephetonine, extracts of drugs containing silicic acid. Heimfried Laboratorium Schloss Apotheke, Hannover, Germany.

Heimfried Metabolic Coated Pills—Contain extractum rhei compound, extract of cascara sagrada and sapo comp. Laxative and for cleansing blood and counteracting tendency towards obesity. Maker as above.

Hepaventrat Granules—Contain active substances found in liver and stomach in concentrated form; 100 grams of pepsin, mixed with 500 grams of fresh liver and 500 grams fresh stomach mucosa. For anaemia perniciosa and secondary anaemia, achylia gastrica, achylitic chloranaemia, dyspepsia, gastrogenic diarrhoea with hypocholia. Nordmark Werke G.m.b.H., Hamburg, Germany.

Iosical—Contains two grams of potassium iodide in 3% colloidal silicic acid solution. Solution prevented from congealing by addition of inorganic serum protective colloid. For hardening arteries, sclerosae, goiter, gout, rheumatism. Apotheker Paul Bolder, Koeln a.R., Germany.

Juvenal—Tablets containing 0.01 gram sodium nucleinate, 0.09 gram lecithin cerebrae, 0.05 gram of calcium glycerinophosphate, 0.15 gram of extractum guaranta (Brazilian cocoa), and obduc. cacaon. For general functional disorders; neurasthenia, hysteria, hypochondria, melancholia, in vagotonic illnesses, tired feeling, listlessness and exhaustion. Dempharma G.m.b.H., Hamburg, Germany.

Macremal—New salve base containing stearin soap with 85% water content and spermaceti. For making salves containing boric acid, zinc oxide, sulfur tannins, liquor carbonis detergens, lithrantol and other tar preparations. Only small percentage of salicylic acid can be incorporated. Hirsch Apotheke, Frankfurt.

Mercinol—Mercury preparation containing 18 to 35% metallic mercury. Engel Apotheke, Breslau, Germany.

Merz Allium—Sirup allii sativ. comp. Contains garlic as well as extracts of mistletoe, horsetail and hawthorn. Prophylatic in intestinal catarrh, diarrhoea, rheumatism, colic and stomach worms. Merz & Co.

Okanimal Tablets—Pluriglandular, biologically tested, sexual therapeutic preparation in tablets. For sexual troubles in animals. Contains active ingredients of ovaries, testicles, exterior lobe of hypophysis, brain substance, extract of yohimbine, extractum colae, extractum gentianae, sodium chlorate. Hormo Pharma G.m.b.H., Berlin.

Okatona—Tablets and suppositories. Contains epiphysia, lupulin, monobrominated camphor, belladonna, phenylallymalonylurea. For ejaculatio praecox and pollution. Maker same as above.

Omnasulf—Highly dispersed, colloidal sulfur preparation in aqueous solution. One ampulle contains 2cc. of solution or one mgm. of sulfur. Used in sulfur irritant therapy, particularly in arthritis, neuritis, neuralgia, acute and chronic septic processes, carbuncles, eczemias, and dermatoses. Dr. A. and Dr. O. Weil, Frankfurt-am-Main, Germany.

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Beauty Clays

Increasing interest is evidenced in Beauty Clays, especially in the West. This article gives components and methods of preparing these products.

REPORTS from the west indicate awakening interest in face clays. It seems unlikely that they will ever again become the best sellers as Mineralava did because of the fact that nearly everything claimed for mud creams can be accomplished as well or easier with modern creams of one kind or another. Notwithstanding, a belief has persisted from ancient times that certain clays possess therapeutic properties and are also enhancements of beauty. Hence clays will probably always sell fairly well. At this date, however, no one seems to have investigated them very closely for the literature betrays a paucity of information on the subject.

Beauty clays are used for many purposes. According to some claims they embody all the properties of the various creams and lotions. It seems safe to claim that they do stimulate circulation by mechanical means. Since the clays contain water and since water evaporates, heat is drawn from the surface of the skin with a consequent cooling sensation. Some clays require the use of exterior heat and hence stimulate circulation by drawing blood to the surface. At all events the various types may be classified as stimulating clays, astringent clays, bleaching clays, wrinkle and blackhead removers and cleansers. It is hard to differentiate them exactly because several of these functions may conceivably be combined in the same clay.

It is emphasized strongly that the following formulas are tentative only and are intended to guide investigation and to illustrate manufacturing procedure. Each will have to be adjusted to suit requirements. This is particularly true of consistency and the tendency to hardening.

STIMULATING CLAY

Fuller's Earth	600 grams
Glycerin	35 "
Tincture of Benzoin	200 "
Water	125 "
Perfume	10 "

Procedure: Mix first three ingredients, add perfume and work in water. Add or decrease water to obtain consistency.

ASTRINGENT CLAY

Kaolin	40 lbs.
Precipitated Chalk	20 "
Alum powder	10 "
Titanium Oxide	6 "
Tincture Benzoin	2 "
Glycerin	5 "
Water	20 "
Perfume	1 "

Procedure: Mix the dry materials, add tincture of benzoin and perfume. Adjust consistency to suit by adding or decreasing water.

BLEACHING CLAY

Tri Calcium Phosphate	87 lbs.
Zinc Peroxide	12 "
Mineral Oil	5 "
Glycerin	15 "
Water	25 "
Zinc Stearate	6 "
Perfume	3 ozs.

Procedure: Mix Tri calcium phosphate, zinc peroxide, zinc stearate, water and glycerine. Mix until smooth, add oil and perfume.

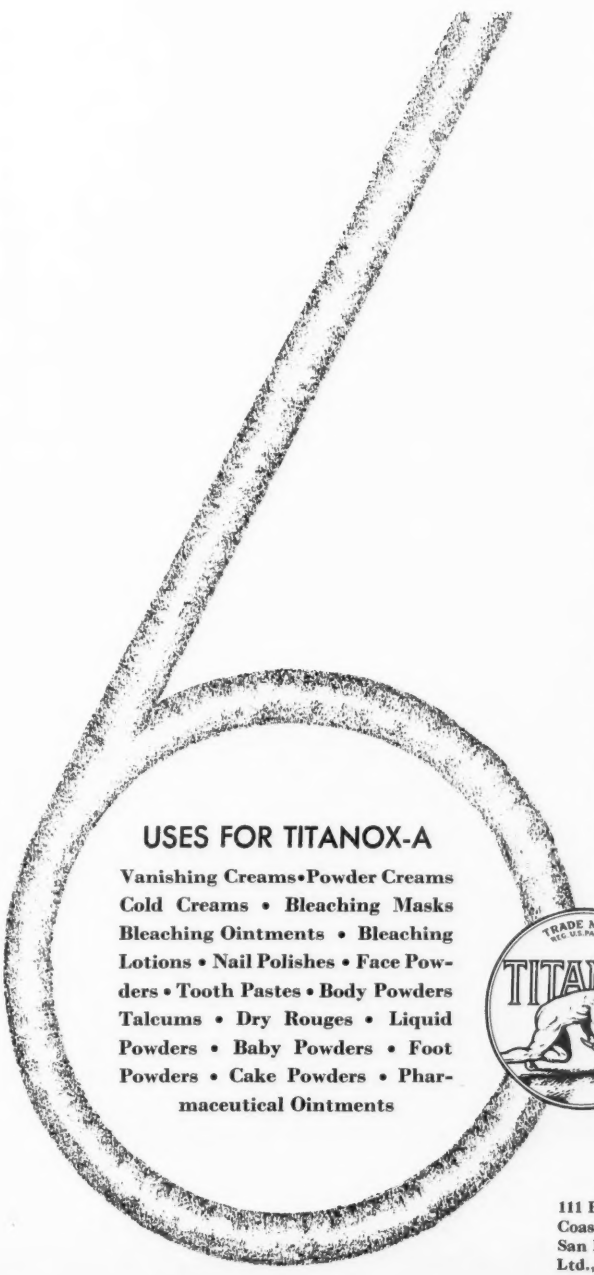
WRINKLE AND BLACKHEAD REMOVER

Kaolin	35 lbs.
Titanium Oxide	8 "
Fuller's Earth	60 "
Magnesium Sulphate	5 "
Water	20 "
Acacia Powder	10 "
Glycerin	40 "
Water	20 "
Tr. Benzoin	16 "
Perfume	6 ozs.

Procedure: Add the acacia to the glycerine and stir until dissolved. Warm the water, dissolve the mag sulphate and add this. Then slowly add the dry material and mix in a mass mixer until smooth. Finally add benzoin and perfume. Adjust consistency by means of glycerine. Because of quantity of acacia present preparations of this kind are likely to get hard. It is

(*Continued on page 160*)

Quality toilet preparations now use this milder pigment



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The Compounders' Corner

Hair Wash for Greasy Hair

High alkali content in hair washes of this sort are harmful to hair and skin. Effective and harmless preparation is 1% resorcinol solution or 2% solution of salicylic acid in 50 to 60% alcohol. Preparation is advisedly perfumed with laurel preparation. Also possible to use 2% solution of tannin, containing 0.25% formaldehyde, 40% strength. Betanaphthol has been used in these preparations. Betanaphthol has been found to have strong physiological action on kidneys when absorbed into blood stream. It should not be used for this purpose. Another recommended mixture is 50 parts soap bark, 50 parts quillaia bark digested with 1000 parts water for 24 hours. Extract is filtered and mixed with 50 parts glycerin and 1200 parts dilute alcohol. This preparation is claimed much superior to usual alkali, soap and alcohol preparation.

Lemon Juice in Cosmetics

Beneficial effects of lemon juice, particularly on skin, is common knowledge. Sun-burn cream containing lemon juice or citric acid is made with 12 parts alcohol, 20 parts 28° Be. glycerin, four parts gum tragacanth, 64 parts distilled water, four parts quinine bisulfate, one part citric acid. It is possible to use required amount of citric acid in place of lemon juice, in which citric acid is active ingredient. Then again lemon oil may also be used in place of lemon juice, although latter, because of additional ingredients that it contains, may have more characteristic action. For example lemon juice cream is made from 1.5 parts white beeswax, 2.5 parts ceresin, four parts petrolatum oil, six parts glycerin and 11 parts glycerin monostearate are mixed and melted by gentle heating on water bath. To molten mass there are added 75 parts fresh lemon juice (pressed). After mixture is completed, 10 to 15 drops lemon oil are added. One part of preservative, such as methyl hydroxybenzoate, is added. After mixture has been allowed to stand for 24 hours in cool spot, it is again strongly agitated. Important step is addition of powerful antiseptic or preservative, because lemon juice is an excellent medium for growth of bacteria. It is best to add preservative, first dissolved in small amount of alcohol, towards end of manufacturing process. In another composition 40 parts spermaceti, 120 parts white petrolatum and 120 parts anhydrous adeps lanae are melted and allowed to cool slowly. Then, while vigorously agitated, 80 parts lemon juice and 120 parts water are added. Mixture is agitated while it cools and towards end of process five parts lemon oil are added. Process is similar to that used in making cold creams.

Platinum Blond Preparations

These preparations consist mainly of sodium perborate or other per-salt. For example, recommended formula contains 75 parts sodium bicarbonate mixed with 275 parts borax, 500 parts powdered soap, 90 parts calcium perborate. Caution! In perfuming only alkali-fast perfumes must be used, for example common soap perfumes are suitable. Magnesium peroxide is also used as active ingredient. Other products have been used based on action of hypochlorous acid, which is new in hair bleaches. An interesting new substance, which has been recommended is sodium dichloryl-sulfamide-benzoate. This is used in dilution of one to 200 parts water. One pastille is accordingly dissolved in glass of water. Benzoate can be used in form of very fine powder mixed with other inert powdered substances, applied directly to hair. Inert materials simultaneously absorb grease from hair.

Foaming Bath Salts

Chief difficulty with foaming bath salts is they lose their activity before use. Composition which is said to keep well contains 15 parts anhydrous citric acid, 25 parts sodium carbonate, 60 parts sodium chloride. Another contains 32 parts citric acid, 48 parts sodium carbonate, 22 parts sodium chloride and 0.5% uranin. These two compositions are tablets. Formula for salts is 75 parts sodium bicarbonate, three parts sodium hydrogen phosphate, 22 parts borax and 0.5 part uranin.

Deodorants

Ordinary deodorant is made with alum, either potash or soda, or aluminum chloride, the latter being probably more popular. Both alum and aluminum chloride are effective but they have certain disadvantageous properties which may be overcome by using aluminum naphtholsulfonate. For example ordinary alum cannot be dissolved in alcohol, but must be used in water. This is disadvantage since preparation does not dry fast. Furthermore, neither is aluminum chloride soluble in alcohol, and it has additional fault in causing tendering of fabric due to evolution of hydrochloric acid during decomposition. Aluminum chloride is also irritating to tender skins. Aluminum naphtholsulfonate or aluminum betanaphtholdisulfonate, as it is also known, is fine, white powder soluble to some extent in alcohol. It is astringent and deodorant and also mildly antiseptic. It is highly effective in removing odor of perspiration from under arm-pits and other parts of body. It is used in one to 2% solution in alcohol of 50% concentration.

Silver Nitrate in Hair Restorers

Silver nitrate is generally considered an effective hair restorer, but while color given to hair is satisfactory and durable, nevertheless there is certain sheen that hair attains which is not desirable. Hair appears greenish black and unnatural. To overcome this difficulty is not easy and experiments must be made with addition of small quantities of organic hair restorers, like paraphenylenediamine, or other metallic compounds, such as copper, bismuth and other salts. By proper combination of these compounds, color will become natural and non-metallic in luster.

Preparations for Large Pores

Pastes are used to cause pores to close up. They contain betanaphthol and soap, the paste being rubbed into skin. In morning it is washed off with soap and water and face lotion applied. Paste contains from one to five grams betanaphthol, four grams precipitated sulfur, 10 grams potash soap and 85 grams petrolatum. Face lotion for use after paste consists of five grams sodium thiosulfate, 20 grams borax, 45 grams glycerin and 230 grams distilled water. Mechanical treatment of pores followed by application of face lotion can be practiced. Face lotion contains 10 grams acetic acid, 80% concentrated, 25 grams eau de cologne and 55 grams distilled water. Another astringent face lotion contains three grams 80% acetic acid, 50 grams 96% alcohol, 50 grams spirits of camphor and witch hazel to make 100 grams.

Softening Calloused Skin

Most useful for this purpose are potassium hydroxide, oils such as almond oil and olive oil and potash soap. Salves containing 60% lanolin and 40% salicylic acid, or 85% potash soap and 15% salicylic acid are also useful. Sodium hydroxide solution, 15% is effective, but not 3% hydrogen peroxide solution. Potash soap plus 10% potassium carbonate, potassium hydroxide or sodium hydroxide is effective. One per cent. salicylic

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acid may be added which increases effectiveness of preparation.

Wettable Sulfur

Ordinary sulfur cannot be wet with water. Precipitated sulfur thrown into a mass of water remains floating on surface, while pulverized sulfur sinks to bottom. Sulfur must be in fine form of division and uniformly distributed throughout preparation properly to exert action. A new type sulfur has been perfected which when thrown into water and shaken thoroughly gives milky suspension. Sulfur is wetted by water. Sulfur is not changed chemically, but its physical structure is different from ordinary sulfur. Such sulfur is particularly well suited for making hair restorers. It reacts readily with metallic salt and a uniformly distributed black precipitate is formed on hair producing level black. It may also be used in skin salves and liquid hair tonics, which depend for their dermatological action on sulfur. Results have shown that new form of sulfur is much more active than precipitated sulfur.

Cream Bases

Cream bases are composed variously depending on their use. Potassium stearate base is easily soluble in water and absorbs considerable water giving a smooth, soft product. It is made from 200 parts white stearin, 200 parts water, 50 parts potassium hydroxide, 35° Be. concentration. Stearin is first melted and potassium hydroxide dissolved in water in another pot. The boiling lye is than added to melted stearin while entire mass is vigorously agitated. Strong foaming makes necessary addition of potassium hydroxide solution in portions. Use of sodium carbonate or potassium carbonate is inadvisable because stearate obtained is not smooth.

Gum tragacanth gives good cream base. Forty parts of pulverized gum tragacanth are mixed with 250 parts alcohol, and 100 parts of water added while vigorously stirred. When mass is uniform, more water is added, to make 8000 parts in all. Two per cent. agar-agar powder may be added.

Good, water-soluble and easily-washed off cream base is made from 14% casein, 0.43% sodium carbonate, 7% glycerin, 21% petrolatum, 0.5% phenol, 0.5% zinc oxide and distilled water to make 100%. Methyl parahydroxybenzoate may be used in place of the phenol.

Non-greasy, stearin cream base contains 200 parts stearic acid, 100 parts glycerin, 80 parts sodium hydroxide, 50 parts alcohol, 580 parts water and perfume. Twenty parts potassium carbonate and 80 parts ammonia can be used in place of 80 parts sodium hydroxide. Glycerin and lye are mixed with 450 parts water and heated to boiling. Stearic acid, melted, is poured into mixture in thin stream with agitation until lye is neutralized. Mass is cooled, alcohol, remainder of water and perfume then added.

Water-soluble, cerate base is made from 90 parts yellow wax, 100 parts water and 3.5 parts potassium carbonate; or 100 parts yellow wax 100 parts 10% ammonia water and 150 to 200 parts water. Solution of sodium oleate in glycerin is also used as cream base.

Cod Liver Oil in Hair Preparations

Best that can be said with respect to clinical experiments with various substances used for increasing growth of hair is that results have been more or less indefinite. There is still no certainty as to correct composition of preparation taken internally or applied externally to produce maximum effect. Nevertheless the work goes on and sooner or later real success will be obtained. As far as external hair preparations are concerned, best that can be hoped from them, when they are simply ordinary shampoos or tonics, is that they will not introduce any injurious substance into scalp.

Certain investigators have been comparing growth of human hair with that of animal hair. There is unquestionably a relationship between them. Healthy animal always has good growth of hair and this determines value of pelt in farming wild animals for fur purposes. Certain experiments made on fur farms with feeding animals cod liver oil have revealed an interesting connection with this product and quality of pelt, as determined by growth of hair. Health of animal has been improved, hair of pelt increased in thickness and strength and pelt itself rendered more valuable. This has been assigned to vitamin A and particularly to vitamin D found in cod liver oil.

Clinical records do not reveal that human beings, fed with cod liver oil or vitamin D, in counteracting rickets, have experienced increased strengthened growth of hair, but this does not mean that this has not taken place or that it is fact that when general health of body is good, health of hair is likewise good, and anything that tends to improve body health will not fail to improve condition of hair.

It is possible to use cod liver oil emulsions for rubbing into skin and to secure good effects as are obtained when the oil is taken internally. Vitamin D, contained in oil, has potential effect on hair and improves general scalp condition. It is also advisable to use oil treated with ultraviolet rays.

It is absolutely necessary that cod liver oil be perfumed. Odorless oil is available, but such oil loses much vitamin activity from deodorization treatment. It is possible to use for same purpose ergosterin, fish oil, whale oil, salmon oil. Important point is that oil contains vitamin D. Banana oil contains vitamin D and also soya-bean oil.

Lanolin Alcohols

Mixture of alcohols is obtained by chemical treatment of lanolin. Product is light amber in color and has faint unobjectionable odor. Melting point is 31° to 40° C., iodine number 45 to 50, acid number 0.1 and saponification number 0.1. Contains 90% cholesterin compounds. Product is practically non-saponifiable. Its use is indicated for petrolatum bases, which have high absorptivity for water. Particularly useful in lipsticks, hair salves and skin creams. Product is cheap; is heavy wax-like compound of high viscosity. Cholesterin is claimed to have particular value in skin and hair metabolism and the product is therefore useful in all kinds of cholesterin compositions as its content of cholesterin and cholesterin compounds is very high.

Pine Oil

Various applications in different industries are discussed. Pine oil is largely used in textile industry, assisting in dyeing of textiles, for kier treatment or cleansing, for degumming silk, etc. Its use as flotation agent is also important in metallurgical industry. It is potent deodorant and is used for improving odor of numerous industrial products, such as metal, shoe, floor and furniture polishes. It has many uses in cosmetic and toilet article industries. Anon. The Perfumery and Essential Oil Record, 1932, pages 405 to 406.

Composition of Asarum Oil

Oil sample had dark color, pleasant aromatic odor and reacted neutral. Density at 15° C. was 1.0274. Asarone was precipitated when oil was allowed to remain quiescent for long time. Oil was unsaturated, contained saponifiable constituent and could be decomposed into 5 fractions by distillation under vacuum in current of carbon dioxide. These were first terpene fraction, containing bornyl acetate; second, bornyl acetate fraction, containing sesquiterpene; third, fraction of methyleugenol and asarone 43.0% of oil, fourth in fraction consisting of 15% of oil and containing asarone and last, fraction containing asarylaldehyde. V. T. S. Bruckner. Journal fuer Praktische Chemie, volume 134, 1932, pages 107ff.

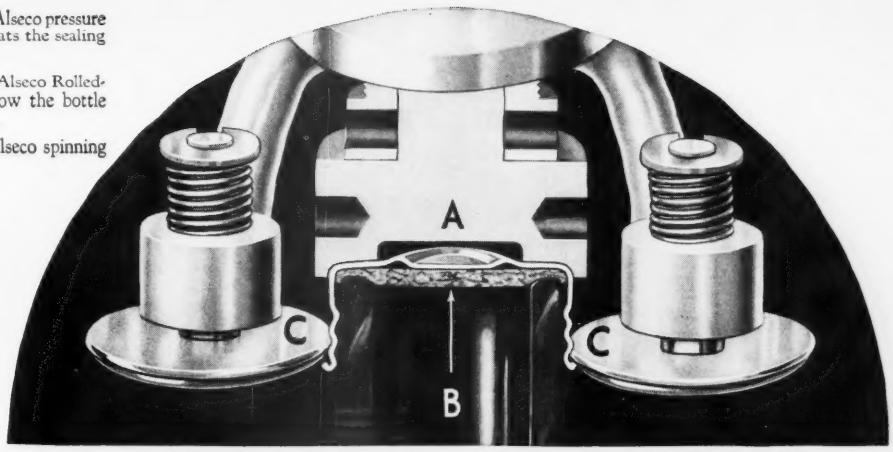
Properties of Terpine Hydrate

Behavior of terpine hydrate in hydration and dehydration processes substantiates view that compound is true monohydrate. Terpine and hydrate form eutectic mixture at 95° C., this mixture containing 10% of latter. Second hydrate of terpine seems to exist. N. Schoorl. Naturwetensch. Tojdschr., Holland, volume 14, 1932, pages 35 and 40.

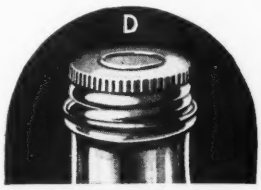
(A) Cross section of Alseco pressure block, which fully seats the sealing medium.

(B) Cross section of Alseco Rolled-On Seal, showing how the bottle top indents the liner.

(C) The patented Alseco spinning rollers.



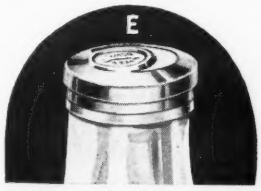
The patented features of this machine give leak-proof, fool-proof sealing . . . . . .



(D) The spinning rollers tailor the plain skirt of Alseco Rolled-On Seals *into the threads* of each individual bottle.

• • •

Alseco Rolled-On Seals made of Alcoa Aluminum provide an initial hermetic seal that is easily opened and tightly resealed.



(E) The spinning rollers tailor the plain skirt of Alseco Goldy Seals *under the locking ring* of each individual bottle.

• • •

Alseco Goldy Seals made of Alcoa Aluminum provide a rust-proof vacuum seal that is tamper-proof.

ALSECO SEALS
TRADE MARK

The Alseco pressure block and spinning rollers—the features that eliminate twisting and jamming with their consequent "leakers" and "breathers"—are patented, available *only in Alseco Machines*. That's why we claim that Alseco Machines do a better, more effective sealing job than other machines.

But we don't stop at claiming superiority. We'll gladly prove it to you, in your own plant, with our machine, operator and seals. We'll cap your bottles for you, seating the cap with stationary top pressure, allowing the bottle to indent its own liner. We'll tailor the skirt of the cap *into the threads* of the individual bottle, in the case of Alseco Rolled-On Seals—*under the locking rim*, in the case of Alseco Goldy Seals. We'll do all this without rotating cap, liner or bottle. The Alseco Machine does all the rotating.

After we've finished, you can test these hermetically-sealed bottles for "leakers" and "breathers". Test them any way you please. We'll abide by the result.

Alseco Machines, with slight adjustments, will cap one ounce bottles or gallon jars, wide or narrow-necked containers. Alseco Automatic Machines cap up to 130 bottles a minute, non-automatic machines as low as 15 a minute. Vacuumizing equipment is available, too, if desired.

Compare Alseco Seals and Machines with your present or any other capping equipment. Please write or send the coupon today for an Alseco demonstration.

ALUMINUM SEAL COMPANY, NEW KENSINGTON, PA.

ALSECO

Seals and Capping Machines

ALUMINUM SEAL COMPANY, New Kensington, Pa.

I am interested in a demonstration of Alseco Seals and Capping Machines.

*Name*_____

*Street and Number*_____

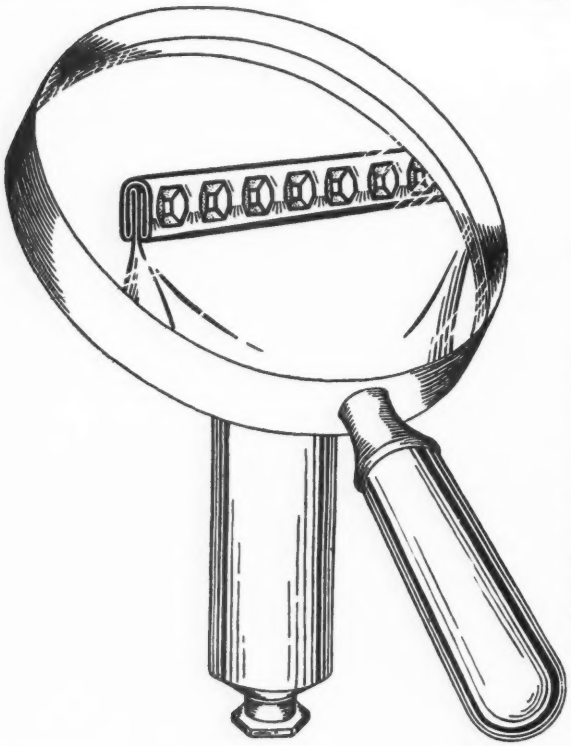
*City*_____ *State*_____

*Name of Company*_____

*Position*_____

A NEW "Clipless Closure"

U. S. Patent 1,852,225
(other patents pending)



The STOKES
INTEGRAL CLIP
"Diamond Lock"

Economical

Saves clip costs, investment in clipping devices, and production delays due to clips.

Leak-Resistant

Metal of tube itself is woven together into a neat, tight seal by deep indentations which do not encroach upon edges of previously made folds, thus avoiding any likelihood of producing minute cracks or pin holes.

SEND FOR SAMPLE TUBE

THIS new "clipless closure" is applied by the STOKES Full Automatic Tube Filling and Closing Machine, No. 90-D.

Features

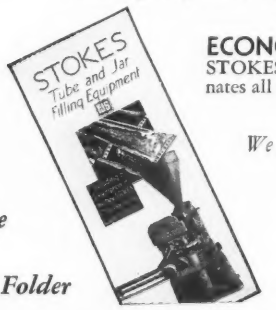
VERSATILE—Fills practically all materials from thin liquids to heavy facial clays and handles tubes from 1/2 inch to 1½ inch by 7 inches.

FAST—Fills, closes and seals 40 to 50 tubes per minute.

UNIFORMLY ACCURATE—Fills eye salve with a 3 grain tolerance; operator compensates for variations in consistency of material by simple thumbscrew adjustment, without stopping machine.

CLEAN—"No tube-no fill" control prevents spillage; avoids soiled machine and waste of material.

QUICKLY "CHANGED-OVER"—Simplified filling mechanism; no reciprocating nozzles or hose; adjustments accessible and can be made quickly without special tools.



ECONOMICAL—Only one operator. STOKES "Diamond Lock" Closure eliminates all clip expense.

We make a full line of "Clipless Closure" machines.

Write for New Folder

FJSTOKES MACHINE COMPANY
Packaging Equipment Since 1895
5932 TABOR ROAD, OLNEY P. O., PHILADELPHIA, PA.

THREE SALES IDEAS IN GLASS

Above are shown three sizes of a smart new bottle (2, 4 and 6 oz.) styled to be "at home" in the most exclusive surroundings.

Powder in glass—the newest of cosmetic merchandising ideas—is made possible by unusually attractive Onlzed *powder jars.*

Onlzed
PHARMACEUTICAL AND PROPRIETARY WARE

Onlzed Flaconettes—ideal for small-volume packaging—especially where a "family" line is concerned. Available in 1 oz., ½ oz., 2 and 1 dr. sizes.

Onlzed
PHARMACEUTICAL AND PROPRIETARY WARE

● The pictures show three ideas to help your sales. We have translated these ideas into sparkling *Onlzed* glass. But we can't really express the sales appeal of these containers here. To appreciate this, you must see for yourself how they make your product stand out in any group—how they attract the shopper's eye. Our designers will be glad to cooperate with you on the interesting labeling treatments which these new *Onlzed* containers make possible... Owens-Illinois Glass Company, Toledo, O.

OWENS-ILLINOIS

1873 . SIXTIETH ANNIVERSARY . 1933

Save time and money in packing

Evening in Paris cosmetic set, with ten-ply KIMPAK *wrapped in tissue and placed at top of package to prevent movement and breakage.*

Use KIMPAK *Crepe Wadding. Makes your product look better —gives greater protection against breakage*

IT IS the new idea in protective packing materials! Doing away with sawdust, linters and low-grade packing materials — yet with surprising economies.

Many hundreds of products are now protected with KIMPAK, in addition to liquids and fragile articles; cosmetics, vanities, wood and metal products with fine finishes that deserve KIMPAK'S super care in transit. KIMPAK plays a part in the success of low cost merchandise, too.

KIMPAK is especially valuable for packing liquids because it absorbs 16 times its weight in moisture and conforms to Postal regulations. It is amazingly low in cost and because of its bulk and lightness gives greater protection. Customers are doubly pleased with its clean, soft appearance.

It comes in rolls, sheets or pads, in various thicknesses — plain or backed with Kraft (smooth, creped or waxed), jute liner, or tissue, according to your requirements. Mail coupon for more details.

Illustration shows bottle of Sanford Writing Fluid ready to be wrapped in KIMPAK *and placed in carton for mail shipment.*

Showing use of KIMPAK *to protect sample bottle of Aqua Velva demonstrating the mailing strength of a National Metal Edge Box.*

KIMPAK *protects mail samples against breakage. Illustration shows sample bottle of Pepsodent Antiseptic which was wrapped in* KIMPAK *and placed in package for mailing.*

Kimpak
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES
CREPE WADDING

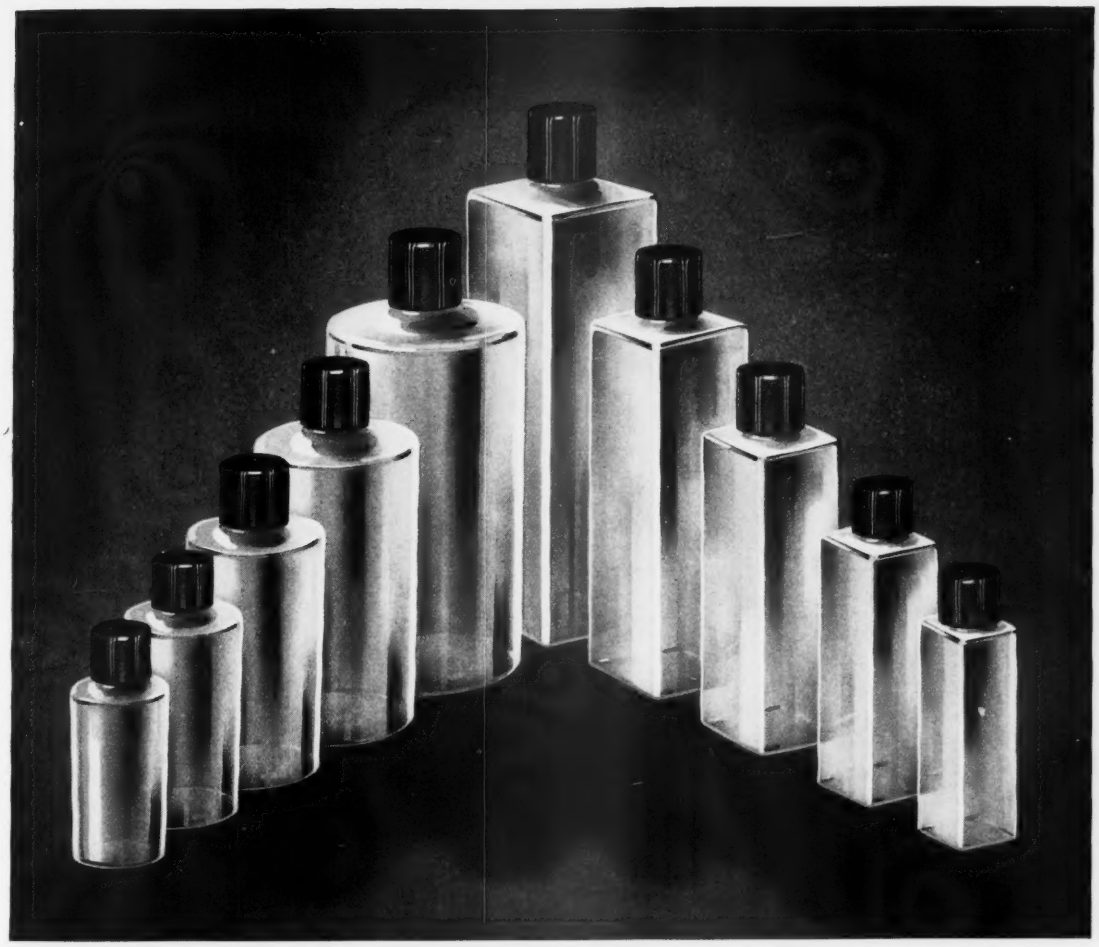
KIMBERLY-CLARK CORP., Manufacturers, Neenah, Wis.
Address nearest sales offices at
8 S. Michigan Ave., Chicago 122 E. 42nd St., New York City
510 W. Sixth St., Los Angeles, Calif.

Our product is.....
Send samples and prices.

Company .....

Attention of .....

Address DCI-2



TWO DISTINCTIVE CREATIONS

These brilliant, sparkling bottles give a note of fine distinction to your product. They are stock bottles, suitable for many different kinds of products. By a skillful use of label and cap, you can easily adapt these bottles to make a beautiful, original container.

The round style is No. 337, and the square style is No. 338. Both styles are particularly well adapted to automatic labeling and packaging. They are available in all sizes from 1 dram to 16 oz. for immediate delivery. The 1, 2 and 4 dram sizes shown in the smaller illustration are suitable for dispensing samples and many other purposes.

Both series are furnished in standard finish for plastic or metal screw caps and may be supplied with or without black plastic caps.

CARR-LOWREY GLASS CO.

Factory and Main Office: Baltimore, Md.

New York Office: 500 Fifth Avenue, Room 1427
Telephone: CHickering 4-0592

Chicago Office: 1502 Merchandise Mart
Telephone: WHItehall 4326

IRRADOL-A
REG. U. S. PAT. OFF.
EACH FLUID OUNCE CONTAINS:
Liver Oil (100 A) . . . 5 Minims
Viosterol (250 D) . . . 10 Minims
Vitamin B Extract . . . 25 Grains
Iron and Ammonium Citrate . . . 4 Grains
Copper Nuclcate . . . 1/4 Grain
in a palatable base containing Malt Extract.
PHYSIOLOGICALLY STANDARDIZED
DOSE:
For infants, 1/2 to 1 teaspoonful three times a day. For older children, 2 teaspoonfuls three times a day. For adults, 1 tablespoonful three times a day. The dose is best given during or after meals. It may be taken plain or mixed with water or milk.
PARKE, DAVIS & CO.
DETROIT, MICH., U. S. A.
12 Ounces
Myeladol
ALCOHOL 5%
Each fluid ounce contains:
Cod Liver Oil (Upjohn), 120 minims
Concentrated Extract Red Bone Marrow, 10 minims
Iron and Ammonium Citrate, 4 grains
Malt Extract, q. s.
Copper and manganese are also present, in the iron-copper-manganese ratio that has been found efficacious in secondary anemias. The malt extract provides a palatable vehicle for these ingredients and furnishes the valuable dietary adjunct, Vitamin B. Together with the oil it represents a caloric value of about 150 calories per ounce.
The usual dose for adults is one to two dessertspoonfuls three times a day. It may be taken undiluted, or if it seems over-sweet, a slight addition of water may improve this matter. In general this is unnecessary. For children, one teaspoonful three times a day.
Myeladol is most palatable when cold.
The Upjohn Company
Kalamazoo, Mich.

Packaging

Greater activity in heavy emulsions has centered attention of drug manufacturers upon packages especially designed to effect the greatest consumer

OF LATE years there has been a considerable increase in the number of medicinal emulsions placed on the market. This has led to the development of the wide-mouth bottle to a rather surprising degree. Medicinal emulsions as a rule do not pour very easily and it may be said that in winter they do not pour at all. This necessitates of course an easy means of getting at the contents without having to lower the viscosity by warming it. Since these medicines are taken with a spoon it is obvious that it is easier to dip the spoon into the container than it is to pour from the container on the spoon. Besides it is very difficult to pour a thick emulsion into a spoon; one either gets an overflow or an insufficiency. The ease with which these preparations can be taken and the public approval they have received seems to augur that the wide mouth container will be employed for other products as well.

Milk of magnesia could probably be administered easier by dipping the spoon into the bottle than by pouring it. Pouring messes up the bottle threads and the deposit in time attacks the cap so that an unsightly crust is formed. Besides, milk of magnesia sometimes coagulates slightly so that a great gush of it is apt to come out suddenly if the user is not careful. Even to light medicinals could the dipping principle be applied. Cod liver oil, for instance, is not easy to take without spilling it either on the floor or on the bottle for the reason that natural hand tremor is enhanced by the fact that the user is holding an uncorked bottle in one hand which must be set down carefully to avoid tipping it over while at the same time he is holding a brimming tablespoon which he is trying not to spill. It would simplify matters if the user could set the bottle on the table, remove the cap and dip out a spoonful.

In the accompanying illustrations we have a group of wide mouthed medicinals which show how well this particular type lends itself to easy dosage, display and packaging. It will be observed that for the most part the shoulders of the bottles have been eliminated. This permits the consumer to get every bit of the contents out with a spoon, a feat which would be impossible if the bottle had any sort of shoulder.

The Irradol-A package is very nearly a perfect package in many respects. The very wide two piece shell cap in black lends an unusual touch to the cylindrical amber bottle. The typical Parke, Davis label is done in blue in white to distinguish the product from Irradol which is similarly packaged and which is done in the usual brown and white colors of the company. The blue and white furnishes a most attractive contrast for the brown color of the bottle and product. Being almost a perfect cylinder, this package presents no production problems. Naturally, products of this type if filled cold must be filled on some sort of a force feed filler, nearly all of which require a relatively wide orifice.

Emulsions

convenience. Grace, beauty, utility, distinctiveness and practicability have all been worked into these containers to more or less degree.

Hence, this package is easy to fill regardless of how it is filled. Also it is easy to label and cap.

In designing the Cream of Nujol package, Stanco, Inc., followed the style of their original Nujol package, applying to it a much wider mouth. The Nujol package has always been of the squat type, making certain that it would fit between the shelves of the standard medicine cabinet. The reduction in height from the ordinary container makes it an easy package to handle in production beside giving it unusual display value. Even though scant attention apparently was paid to the decoration of this package, its squatty shape imparts a certain distinction. There are few squatty type bottles on the market.

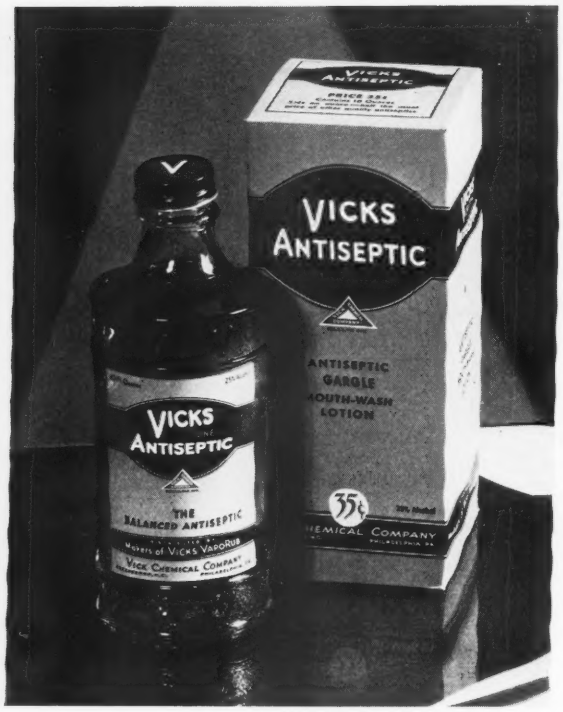
Upjohn's Myeladol is an attractively shaped container. The tapering lines of the upper part of the bottle give the container a distinctive character at the same facilitating easy and complete removal of the contents.

The Petrolagar package is likewise an excellent example of attractiveness and consumer convenience in a wide-mouth container for an emulsion. This package also has no shoulders which might interfere with easy and complete removal of the contents. The package attractiveness is enhanced by the color of the label which is printed in reverse style. Different colors are used for the various types of Petrolagar, the one in the illustration being a striking red. The letters of the label match the white of the product.

One of the most interesting features of the wide-mouth container as a type, is that from a display standpoint they are conspicuous because their lack of uniformity with the usual shapes of bottles. Also the fact they must be of sizable proportions in all directions, makes them easy packages to stack and therefore makes them steady when used in window or counter displays where they are piled one on top of another.

The wide mouth closures for medicinal products differ radically from the closures used for food products in that the medicinal closure must effect a good sealing reclosure. This has caused the selection of many types by various drug manufacturers, even to the double shell cap used by Parke, Davis & Company for their Irradol-A which presents a very pleasing appearance without the disadvantage of having a plastic cap on a closure of this size.

There still remain on the market a number of heavy medicinal emulsions which are packaged in bottles with fairly narrow closures and with the old style shape of bottle with its shoulders which make it almost impossible to remove the contents easily or completely. However, there is no doubt but that the manufacturers who are considering consumer convenience in the packaging of these products are building up the sale of their products in a way in which scientific merit of the products can not do it.



Vicks new antiseptic is packaged in a specially molded bottle with V's at the top and bottom and a recess for the label. The colors are the familiar Vicks blues with red and white.

The Maltine Co. is now offering a concentrate form of "Maltine with Cod Liver Oil." The package harmonizes with the other members of the Maltine line and the tablets are of very high potency, containing 1200 U. S. P. units of vitamin A.

One of the most attractive of the recent packages is that for Walgreen's new "Lemon Castile Shampoo" shown below. Picture courtesy of Armstrong Cork & Insulation Co.

Second Thoughts on Green Glass

In a wave of enthusiasm, much misinformation was given out regarding the use of green glass as protection against the action of actinic rays. Green glass appears to have very definite limitations, and this article indicates them.

THE recent patent of Mayne R. Coe, of the Department of Agriculture's Bureau of Chemistry and Soils, covering the use of a certain shade of green as a protection for food from light rays offers a starting point for an extensive program of research and study, in the opinion of government scientists.

No revolutionary changes in packing are indicated as yet, they say, as do representatives of the glass container industry and certain other interests concerned. But much study is declared to be needed to determine the effects of light upon foods, drugs, cosmetics and related products; why such effects are injurious, if they are injurious, under normal conditions of trade and commerce, and what should be done about it; what kind and color of containers should be used to preserve such products from injury.

Government scientists declare that there is absolutely no evidence that green light, passing through a container or wrapper of that color, is beneficial to foods, pharmaceuticals or other products. Admittedly, there is evidence, obtained from the Coe experiments and otherwise, that green light is not harmful, as far as causing rancidity of some foods is concerned, but in the same connection there is no evidence that yellow light is harmful. It is pointed out that the yellow glass commonly available for such work transmits red and orange rays, as well as yellow. Failure of such glass to protect against rancidity may be due to the transmission of red light through it.

As one government authority on photo-chemistry expressed it: "Neither amber, brown, or green containers are "cure-alls" for photo-chemical effects. One color may be good for one thing. Another color may afford better protection for another product. The whole question should be studied individually for various products, to see whether there are photo-chemical effects upon them, and if so, what protection should be given. The eye can not be trusted to identify the exact color of rays of light or to select with accuracy the exact shade of glass container or of other wrapper that has the protective value that may be deemed necessary. These problems must be determined with scientific exactitude by such instruments as the spectro-photometer.

"From such evidence as there is on hand, the range of light rays covered in the Coe patent on rancidity protection is narrower than necessary. The probability is that there are a number of other colors that would offer the necessary protection to various products."

Some of the government experts have recently been consulted by representatives of glass container interests, of the paper, food, drug and cosmetic industries, and others interested. In that connection there has been considerable discussion of the necessity that the industries concerned should themselves carry on much of this research. The suggestion has been heard that one or more fellowships should be established by industries, for carrying on this work in cooperation with the Department of Agriculture, and possibly the Smithsonian Institution and other scientific branches of the federal government, in Washington, D. C.

There are, of course, precedents for such an arrangement. For example, mayonnaise manufacturers had a special man assigned to research work in Washington for a long time. The industry paid him a salary. He worked in cooperation with government departments and used Uncle Sam's laboratory and other facilities and equipment, including scientific libraries and collections, frequently conferring with government scientists and obtaining the advantage of their wide experience and contacts.

While Mr. Coe is continuing his work on the effect of light upon the oxidation and rancidity of foods and feeds, the point is that in these days of economy Uncle Sam is not able to enter upon the sort of extensive research that is required to solve the many angles and ramifications of the riddle presented by the effects of light upon drugs, pharmaceuticals, cosmetics, flavors, beverages and food products, nor is he in position to determine how that problem affects the distributing trades and the consuming public, as well as to the glass

E. R. Squibb & Sons has further expanded its line of vitamin products with "Halibut Liver Oil with Viosterol 250-D". The new product is packaged in the two sizes shown, a 5 and 50 cc. bottle, with droppers in the familiar Squibb carton.

To complement its hand cream, Pacquin Laboratories Corp. has added Pacquin's manicure preparations to the line. The liquid polish may be obtained in rose, natural or colorless, and either in individual bottles or in combination with the remover. The bottle and carton shown at the left are effected in a lavender, deep purple and white combination.

"**D**exin" is a high dextrin carbohydrate marketed by Burroughs Wellcome & Co. as a dietary supplement. It is a milk modifier for infant and invalid feeding and is packaged in a large blue lithographed can and carton.

container, the package, paper, or cellophane and other industries furnishing containers or wrappings for these several classes of products.

There is no disposition to criticize Mr. Coe or his patent, as far as it goes. But some government scientists and some experts connected with various interests above mentioned are inclined to take exception to some of the claims made, perhaps without Coe's knowledge or consent, as to the far reaching effect of his green glass upon the food, drug and related industries. It is emphasized that Mr. Coe presented a constructive idea. At the same time, however, it is pointed out that his work shows the need of exhaustive study on the question of protection of many kinds and classes of materials and finished products, in connection with which a vast amount of trouble and heavy losses are being experienced by manufacturing and trade interests, as a result of deterioration of such articles from the effects of light and other causes.

It is learned that officials of the Department of Agriculture are interested in various phases of this photo-chemical problem in addition to the food and feed angles which Mr. Coe is continuing to study. Food research officials in the Department, it is understood, could work to advantage with a special photo-chemist assigned to study certain factors related to special food products.

Many Products Tried

There should be experimentation with flavors, it is said, to determine the effects upon them of light and other factors. Government scientists believe that there is a good chance that flavors may be injuriously effected by light.

Ergot has received special attention from the Food and Drug Administration and the drug industry in recent years, but government experts believe it and other drugs deserve still further attention, with special relation to the light factor and how to protect the products from light. This is said to be particularly true on account of the dark color of some of these drugs. Their deterioration as a result of light action is believed to deserve further consideration.

Many essential oils are complicated and may be destroyed by light, say Uncle Sam's scientists. Some alkaloids are destroyed by light and there is a large range of other substances injuriously affected by light. The loss of drugs in effectiveness may be due to light more than the pharmacal and medical professions realize. A vast amount of experimentation and testing should be done to clear up these fields, it is declared.

While the above suggests a few of the problems awaiting to be solved, Drug & Cosmetic Industry is able, as a result of contacts with government scientists, photo-chemical authorities, and experts identified with various industries and interests concerned, to present here a brief outline of some of the complicated factors in the situation that confronts them and the public.

First, it may be asked, is there a need for further protection in the case of specific foods, drugs, pharmaceuticals, cosmetics, flavors and other products? Is deterioration, under present conditions, a vital problem for a given commodity? If so, to what extent does light contribute to that deterioration under conditions of actual practice in industry, commerce and trade?

The natural method of determining these points it is said, is to take a mixture or product, whether food, drug, cosmetic, etc., and subject it to quantitative examination. The best way to do that is to study it for the influence, if any, of each wave length of light, that is for each different color.

Two Methods

One may do that in two principal ways. He may use glass filters, that is colored glasses, that absorb all the light except one color or shade. Or, in the second place, one may use a monochrometer. This instrument is an arrangement of prisms and lenses which breaks up the light into its component parts, or rays. The advantage of the monochrometer over the glass filter is that the investigator can obtain a more narrow wave length range, or a purer color.

If one determines the deterioration which takes place in each color or wave length, he may find, for instance, that it is due to a certain range of light rays of red color, or again that it occurs in some shade of blue. In such a case it may develop that orange, or red, or green light produces no bad effect.

After facts have been ascertained for a given commodity, then the problem of the packager is to select a wrapper or container that excludes the damaging light rays. Probably some of the colored containers on the market are protective against photo-chemical action affecting various products.

Scientists say, on the other hand, that it is equally obvious that if photo-chemical reaction was only promoted in a certain product by blue, violet, or red rays, that a perfectly satisfactory container for such a product could be made of a glass which transmitted orange and yellow rays, as well as green.

Certain publications have claimed that green is effective as protection against light deterioration, but they have failed to show that some other colors would not be just as good for like purposes, in the case of certain products. Some other glass container, or some other wrapper, it is declared, might give adequate protection and at the same time it might have better sales value. Because it might transmit more light it would be better for use as containers of certain products, as it would yield greater visibility for them.

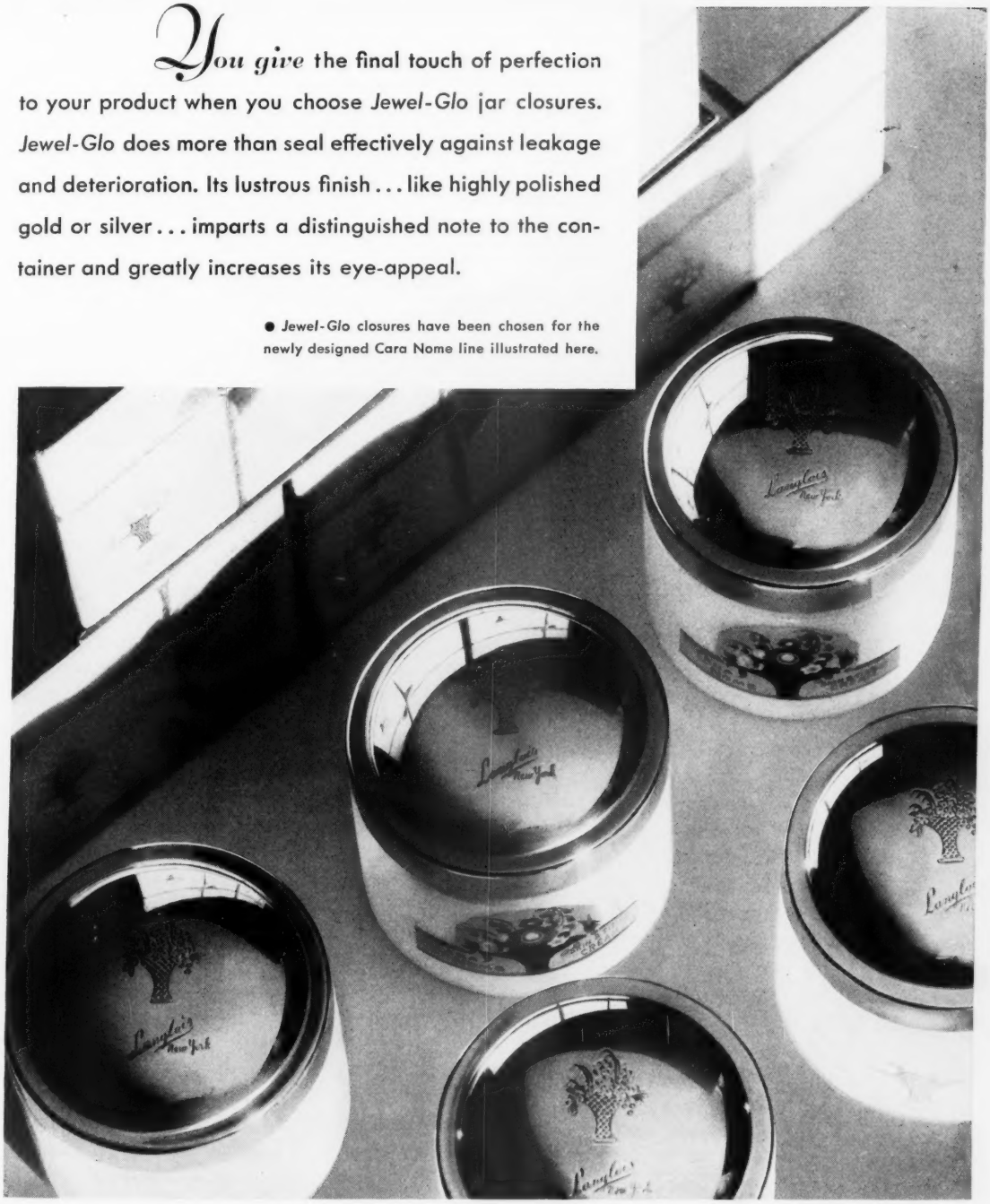
So far in the above outline of the situation, only color has been considered. The next point necessary to consider, say the scientists, is the intensity of the light. For example, a photo-chemical reaction may proceed at a much slower rate in red light than in blue light of the same intensity.

It happens that red rays are a good deal stronger in ordinary sunlight than are blue and violet rays. Consequently, a weak photo-chemical effect in the red may

The "Cashmere Bouquet" line of the Colgate-Palmolive-Peet Co. has been enlarged by the addition of the following new items: cleansing cream, tissue cream, foundation cream, face powder in five shades, dusting powder, rouge in five shades, lipstick in three shades, cream rouge, hand lotion and astringent. The line has been packaged in a lovely green as shown on this page.

You give the final touch of perfection to your product when you choose *Jewel-Glo* jar closures. *Jewel-Glo* does more than seal effectively against leakage and deterioration. Its lustrous finish . . . like highly polished gold or silver . . . imparts a distinguished note to the container and greatly increases its eye-appeal.

● *Jewel-Glo* closures have been chosen for the newly designed Cara Nome line illustrated here.



Let us send samples of the latest JEWEL-GLO *finishes*

CONSOLIDATED *Safety Pin Co.,* BLOOMFIELD, N. J.

OWNED BY THE MAKERS OF CHASE BRASS · NEW YORK SHOWROOMS: 200 FIFTH AVENUE

be more important in causing rancidity or deterioration than a strong photo-chemical effect in the blue, where the intensity of light to which a cosmetic or drug product is subjected is relatively weak.

If it be assumed that scientists have determined in a laboratory what colors of light promote deterioration of a given product, and how fast deterioration takes place for a given intensity of light of such colors, then the very practical question arises, how great an intensity and for how long a time is the article subjected tolight exposure in handling, in the ordinary channels of trade and commerce. This involves a study in business practice.

It is emphasized that adequate study has not been given to any wide range of commodities to determine the effect of light upon them. There are several ways in which such a study could be made on a practical scale. Here would be a simple, practical way, in the judgment of government scientists.

Having determined the colors and intensity of light which produce deterioration in a given commodity, containers could be made excluding those colors. Then the commodity should be packed in 100 such containers, sav, and distributed in representative stores, or other commercial establishments, with an equal number of standard containers packed with the same commodity. At the end of the time the article was usually kept on the shelves, the containers could then be collected and their contents tested to see whether the protective containers had produced an improvement in the condition of the goods, as compared with those handled in the standard ways, and had, therefore, been profitable.

The acid test of the practicability of protecting drugs, pharmaceuticals, cosmetics, flavors and other products from the deteriorating effects of light will be found in the perhaps vulgar question, does it pay? If it would not pay, as a commercial proposition, the trades and industries concerned may as well dismiss it from consideration. The admitted fact that some kinds of light under certain circumstances may be harmful to certain products, would then take its place in the vast collection of scientific data interesting merely from a laboratory standpoint.

It has been claimed that a black container or a metallic foil wrapper would protect numerous products from deterioration. However, scientists say that a black covering might produce an increase in temperature of a product, which would actually hasten deterioration. A method excluding light completely, they say, will undoubtedly prevent photo-chemical deterioration, if it would otherwise occur. But, on the other hand, it might create new difficulties, in addition to concealing the container's contents. Metallic foil may reflect light and give rise to other problems.

This naturally leads on to the proposition that deterioration of many products is believed to occur as a result of heat, moisture, air, and other factors, as well as light. Rancidity and perhaps other forms of deterioration are due to oxidation. Sometimes light promotes oxidation of certain products under some circumstances. But, scientists declare, oxidation is largely caused by the presence of air. If oxidation is the sole cause of deterioration of a product, say the glass container people, the only problem is to eliminate the oxygen. That may or may not be a practical difficulty. There is such a thing as vacuum packing, of course, which has been successfully used in certain industries.

If an article is packed in a non-air-tight container, there then exists the problem of aeriation and moisture as well as temperature, perhaps in addition to oxidation. Any of these factors may contribute to deterioration, it is declared.

In discussing the effects of light upon various products, photo-chemists liken the effects of the presence of certain coloring matter in a product to the use of dyes on photographic films or plates. In the one case, as in the other, it is declared, these colors or dyes act as sensitizers, which catch and gather up certain rays of light, and this energy brings about the reaction. For this reason, it is declared, it is not safe to say that addition of a green dye or of some chemical to certain products would have a protective effect against deterioration from light. Quite the contrary might be the case. The green color, by combining with some ingredient in the product needing protection, may possibly have just the opposite effect by rendering the product peculiarly sensitive to photo-chemical reaction. It would become hyper-sensitized.

In connection with this point, government scientists believe that the question of coloring matter in cosmetics, toilet preparations and soaps, is deserving of special study.

Cosmetics made with one kind of oil base may need one kind of protection, or protection from one color of light. Those build upon another oil base may need another kind of protection. But it must also be stated that other variable factors, such as heat, moisture, air, etc., may be much more important than light, with relation to the deterioration of cosmetic and similar products. Scientists believe that light has been considered less than it deserved, and it is now conceded to be very important. However, it is not all-important.

If oxidation causes deterioration of cosmetics, that may be due not so much to light as to the presence of a considerable proportion of air in an emulsified product, for instance, say the scientists. Further, they say, wherever oxygen is present, due to methods of manufacture, containers of certain colors would probably possess in themselves special protective values.

Also of interest to the cosmetic and drug trades, it is believed, is the statement of competent scientists that it is not organic oils, fats and waxes alone that are subject to deterioration from light. On the contrary, they declare, other organic materials are likewise subject to photo-chemical reaction that may result in a different form of deterioration than rancidity.

Customers favor products that have INVITING CLOSURES

THE SALES APPEAL of your closure does not end with beauty alone. Good looks are a factor in selling, of course. But most buyers today are "closure wise." Having had much experience with glass packaged products, they demand convenience as well as good looks.

Easy removal is always a factor in the choice of the "closure wise" buyer. And if yours is a product that is used a little at a time, the resealing qualities of the closure are likewise highly important. Liners that deteriorate or come loose, cap shells that rust or corrode on the bathroom or pantry shelf can hardly be expected to win consumer favor.

Obtaining a closure for your product that is "right" from every angle is by no means a simple task. That is why so many important manufacturers are taking advantage of 7-Point Closure Service. The broad experience and complete facilities to be found at C. C. & S. smooth the way to a correct solution of every sealing problem.

Use this Service to obtain the RIGHT CLOSURE FOR YOUR PRODUCT

CROWN CORK & SEAL CO. Baltimore Md.

WORLD'S LARGEST MAKERS OF CLOSURES FOR GLASS CONTAINERS

It's all in the CAP

The addition of the four new shades, mauve, jade, radiant rachel, and special brunette, to the Kathleen Mary Quinlan line of face powders forms a very complete and well rounded color chart, blending from the white and lighter evening shades to the very deep rachels. The two new evening shades, mauve and jade, are packaged in the "Poudre de Pearle" glass jar with decorative black plastic top while the other two are packaged in the "Mist of Dawn" pink satin box as well.

A treatment line consisting of a liquefying cleansing cream, a liquefying skin and tissue builder, a powder base and an astringent, has been added to the Colonielle products of Anre, New York. The cleansing cream is packaged in two size opal jars, three and eight ounces, with black and silver labels. The tissue cream and powder base are in the two and three ounce sizes respectively.

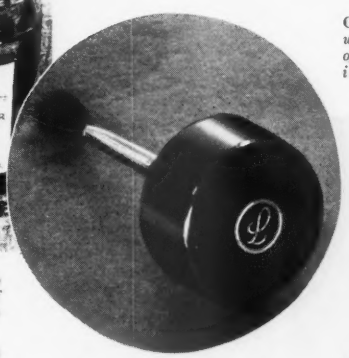
Frederick Stearns is offering two new products *very attractively packaged as shown.* The "Rose Oil", part of the Nyal line, is *packaged in rose and white, while the "Liquid* Analgesic" is in gray, black and red.

CUSTOM MADE or READY MOLDED

You'll find just the cap you want in this COMPLETE LINE . . .

HERE'S A DISTINCTIVE PRIVATE DESIGN *made to order by Armstrong for Lesquendieu, Inc. It's an example of the special Artmold Caps which we supply to many well-known manufacturers.*

APPLICATORS, TOO! *Artmold Caps can be fitted with brushes, rods, swabs, etc., for applying your product*



GRACEFUL MOLDED CAPS OF STOCK DESIGN *were chosen for Léon Navar toilet preparations. Armstrong offers a variety of stock design Artmold Caps and Jar Covers in a full range of sizes. Available in all colors and in long, medium, and short lengths.*

MATCHING your packages with molded caps of the right color and shape is easy with the wide range of Armstrong's Artmold Caps and Jar Covers to choose from. Easy, too, to get custom-made caps of your own design.

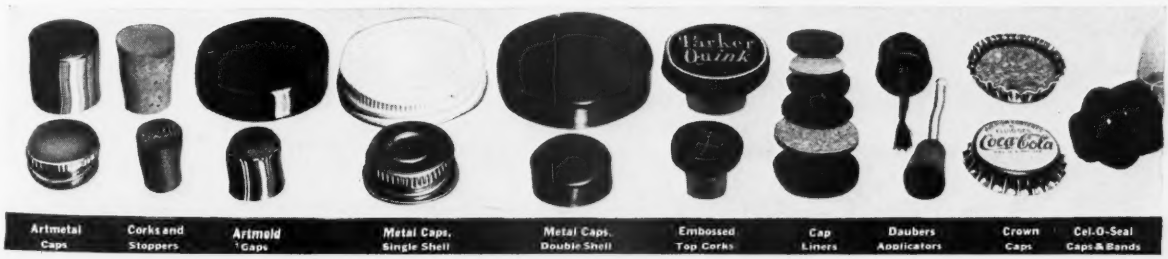
Right now make a note to send for the illustrated folder on Armstrong's Artmold Caps. Get the facts about this large and varied molded line.

Armstrong offers a complete closure service (see full line below). Take advantage of our Package Styling Department and let our laboratories run sealing tests for you. Armstrong Cork & Insulation Company, Closure Division, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's (A) Product

Armstrong's Artmold Caps

Consider, also, these other closures in Armstrong's Complete Line



Double D Laboratories, Royal Drug's new subsidiary, is marketing this new "Double D Fortified Cod Liver Oil" made under exclusive license in the proprietary medicine field to the Zucker patents.

Jean Jordeau, Inc., is now offering "Ab-Scent" in stick form in an attractive pearl and green case. This new deodorant retails at 50 cents.

The paper collapsible tube is here! Two samples are shown below. Decoration is excellent, shoulder and cap are molded plastic, and the filling end is clipped similarly to the tube. The paper is resistant oil stock about equivalent in weight to oiled liner paper. It is said to be odorless, resistant to acids and alkalies and capable of standing 40 pounds pressure. The tube is rolled from flat decorated sheets; sealed with a specially developed adhesive; and filled with the same equipment, with slight adjustment for clipping, as tin tubes.

"Hormez" is the latest hormone cream. It is said to contain actual glandular substances, hormones and nourishing oils.

CUTICURA QUALITY--- IN NATIONAL TUBES

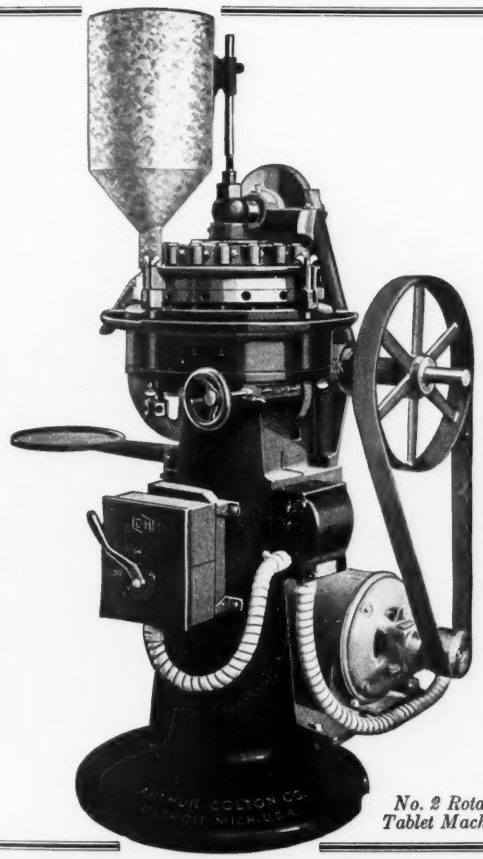
"Cuticura—a name synonymous with quality the world over—presents its shaving cream in tubes of three sizes, including the new Guest Size. All are uniform in appearance—Deep Orange with Black facings, stepped up by a top coat of brilliant transparency and real protection . . . Truly, tubes that proclaim quality in definite tangible terms . . ."

These three Cuticura tubes are further evidence of the inherent character of National tubes. . . Given a product of merit, National Tubes will tell its story in "definite, tangible terms" . . . and after all, that's more than half the battle in a merchandising sense. Remember too—that this tube quality costs you no more.

Further information and prices upon request.

NEW YORK OFFICE
331 Madison Avenue
Phone: MUrray Hill 2-1626

NATIONAL COLLAPSIBLE TUBE COMPANY
PROVIDENCE, RHODE ISLAND



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

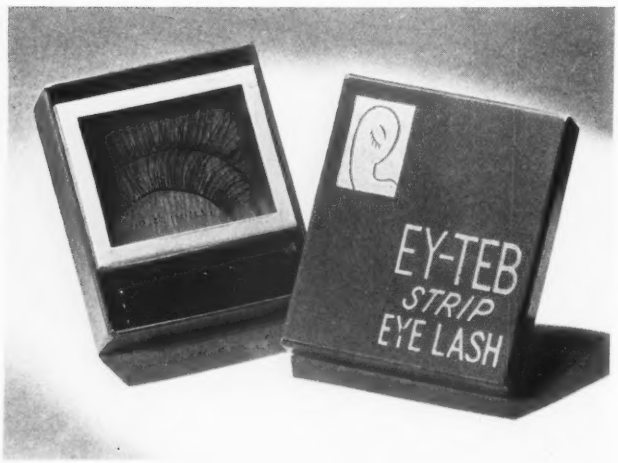
The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

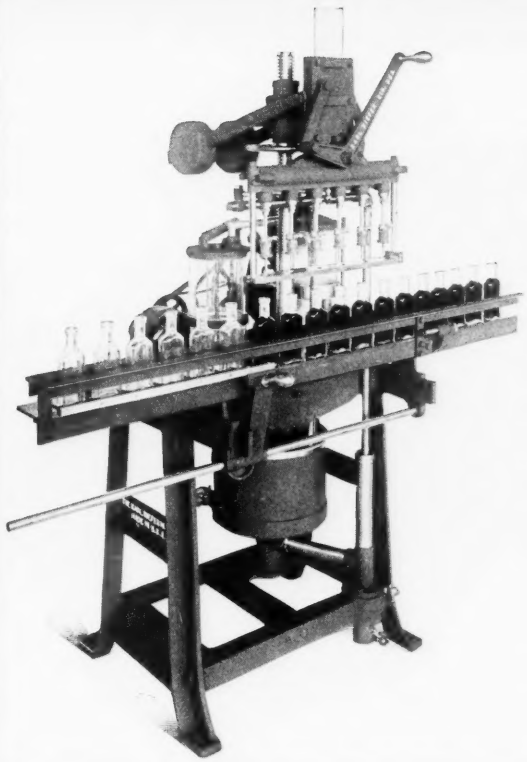
ARTHUR COLTON COMPANY
2620 East Jefferson Ave.
Detroit, Michigan

May Queen (above) gives a sample of its new lotion with every box of powder. Eye lashes in strip form are easily and quickly attached by the application of Ey-Teb liquid (below) to the upper lashes and the application of a strip of lashes. A set of eye lashes with application liquid and brush are packaged in a red box containing directions for use on the inside cover.

"**F**lossy Deodor Stick", is packaged in two sizes; the larger one in a white stick with a red cap; the smaller in a black and gold combination stick. Distributors of this new product of the Hydrox Chemical Co. are Kimm-Libbey, Ltd.



A new size powder box, somewhat smaller, has been developed by Chanel, Inc. for its complete line of powders, including the new Ivoire de Chanel odor, No. 5 and Gardenia. A square cut-out in the outer carton fitting over the square cellophane window in the bottom of the white powder box with its black decorations permits of a view of the powder shade without removing the box from the carton.



YOUR JOB today, as owner or superintendent of your plant, demands getting better results and lower costs than ever before.

Are you handicapping your efforts by antiquated equipment that prevents toeing the mark with competition?

OUR JOB is to help you and, in order to do this, to produce more efficient machinery than has ever been used before.

Here is one of these machines—the

★ "CINATI" VACUUM FILLER ★

—for the manufacturer of liquid products, with an output of 80 to 135 gross a day.

Some use it for only one product or for one bottle. Others package several products or have various bottles. In any case, it does the job to perfection. Six bottles filled at every operation. Six bottles filled with absolute accuracy and uniformity,—unless a bottle is imperfect, then it goes through without a drop of waste of product.

Our catalog tells you all about it and other Kiefer semi-automatic, full automatic and hand-operated equipment. When you write for it, tell us about your problems.

The

KARL KIEFER MACHINE COMPANY

CINCINNATI ◆ ◆ OHIO

TRANSPARENCY

WITHOUT EXPENSE

WEATHERPROOF

RIEGELINE

Riegeline is a newly developed product, combining the economy of ordinary glassine with the transparency of more expensive wraps. It twists well, works rapidly on any wrapping machine, requires no special adhesive, and will not expand in wet weather or shrink to the splitting stage in dry weather.

Liberal Samples and Prices Promptly Furnished

RIEGEL PAPER CORP.,

342 Madison Avenue

New York

"FILMA-SEAL"

(the double seal of cap and film)

Is used on many Nationally known products.

PREVENTS

EVAPORATION — LEAKAGE — TAMPERING

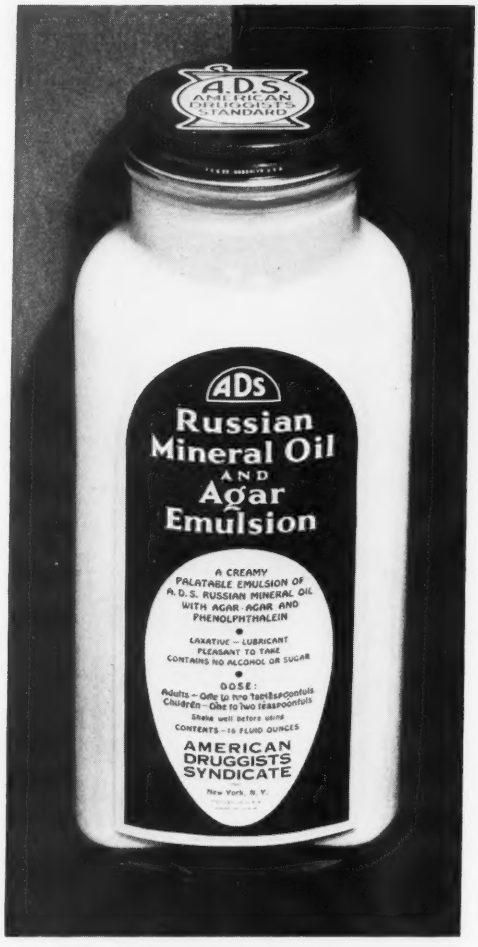
Send us a few of your packages to "FILMA-SEAL" and we will prove its advantages to you.

FERDINAND GUTMANN & CO.

Brooklyn, New York

Trade Marks Reg. Pats. Pending

California Concentrating Co. is offering what is described as a natural fruit regulator called "Prudiet."



Ed. Wood & Co.'s new vanity, the squarette, is developed in all the latest shades including lavender, yellow, blue, flame, green, grey, brown, black and white. A unique feature is the location of the rouge pocket atop the powder compartment, thus permitting of a good size bevelled mirror in the case top.

American Druggists Syndicate's latest product is "Russian Mineral Oil and Agar Emulsion," packaged in blue and white as shown here.

A standard design bottle has been developed by Myrurgia, in four sizes to contain the many odors of this line. Some of the former decorative bottles will be retained but all odors will now be obtainable in the new bottles. A gray carton with red decorations has been chosen to complete the package.

THERE'S SALES APPEAL IN . . . . . THE TUBULAR PACKAGE

A powder drum from Cleveland Tubes

A Tubular shape "does something" to a package that's hard to explain but certainly adds to its interest, draws you to it. And then, too, there's the item of economy. Our job is to help develop new, individual tubular packages, to achieve new economies, new sales appeal for our customers. Why not get in touch with us, now?

THE CLEVELAND CONTAINER CO.
10627 BEREA ROAD, CLEVELAND, OHIO

Plants: Cleveland, Detroit, Hoboken, Philadelphia
Sales Offices: Pittsburgh, Rochester, Chicago

"A Product of Boston"

THE McINTYRE HANDY CAP TIGHTENER

(Patent Pending)

To loosen caps, press down and turn to left

To tighten caps, press down and turn to right

No. 1 size, similar in design to above, will tighten from the smallest size bottle cap up to 24 m.m. size.

No. 2 size, as illustrated above, will tighten sizes from 20 m.m. up to 38 m.m.

They are both suitable for C. T., Amerseal, Duplex and all moulded caps, without doing damage.

The price of the No. 1 size is sixty cents (60¢) each, and for the No. 2 size fifty cents (50¢) each, strictly F. O. B. Boston, Mass.

JOHN D. McINTYRE
17 Stellman Road
ROSLINDALE, BOSTON, MASS.

HASKINS
HIGH-SPEED BOTTLE and JAR CAPPER
For Use with ALL TYPES of Screw-on Caps

In every industry using screw-on caps, HASKINS Method speeds up the work, seals caps more uniformly and eliminates hand operation. Removes hazards of loose caps and fatigue to operator.

Motor unit operates from 110-volt A.C. light socket current. Very low current consumption. Flexible shaft unit suspended from sturdy bench mounting by means of special spring arrangement, permits operation at speeds up to 100 driven caps per minute. Bench mounting adjustable for different heighth bottles and jars.

FLEXIBLE SHAFT TYPE BCF

Chucks used to drive caps easily and quickly changed. Adjustment of tension is simple and positive.

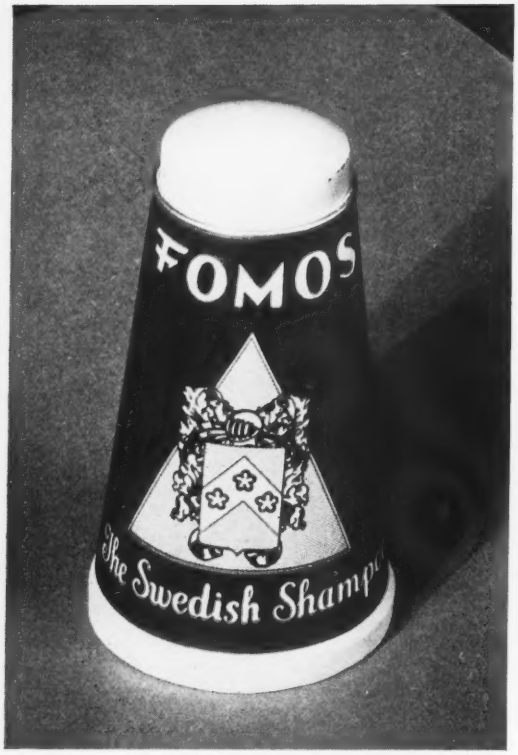
CAPPING COLD CREAM JARS

THESE FEATURES
Insure Positive Savings and Complete Satisfaction

1—Lowest price electric-driven Capper.
2—Positive, Uniform seal.
3—An auxiliary Capper which solves many problems.
4—Caps bottles in trays.
5—Caps bottles or jars on conveyors.
6—Capping speed in excess of best semi-automatics.
7—Handles practically Any shape cap.
8—Handles fragile, plastic caps.
9—Handles metal caps without damage to finish.
10—Eliminates fatigue and resulting hazards.

Write today for prices and complete information.

R. G. HASKINS CO.
4666 W. Fulton Street **Chicago, Ill.**



Fomos, a powdered soap shampoo scented with pine, is packaged in a pyramid shaped green and yellow container with a most convenient and useful sifter top, while the Sani-Seal Bandage is packaged in modern fashion with the price prominently displayed.

Veolay has designed a new display stand and powder box. The box is designed with an oval window in the drum and one to match in the cover, so that the shade of powder is visible without opening the box.

To lower the cost of your

Lemon Flavor

AND GET BETTER RESULTS

An actual test in your own products will prove the two-way benefits of Exchange Brand Cold Pressed Oil of Lemon. It is low in price, yet can be depended upon always for uniformly fine flavoring value. These advantages result from Exchange methods of production and standardization—and the exclusive use of California Lemons from the famous Sunkist groves.

Exchange BRAND

OIL OF LEMON
(California)

Sold to the American Market exclusively through:

DODGE & OLCOTT COMPANY
180 Varick Street
New York City

FRITZSCHE BROTHERS, Inc.
78-84 Beekman Street
New York City

Products Department
California Fruit Growers Exchange
Ontario, California

Producing Plant
Exchange Lemon Products Company
Corona, California

SPOTLIGHT YOUR PRODUCT

There is a Difference in Glass

● When the color of your product is important, beautiful glass adds sparkle and brilliance which often doubles eye appeal. Dull, lifeless glass, on the other hand, can kill the color, and there IS a difference in glass! Make us prove it! Ask for sample and observe your own product spotlighted by Hart Glass.

HART GLASS MFG. CO.
504 E. Center St. DUNKIRK, INDIANA

● CRYSTAL CLEAR BEAUTY IN EVERY JAR

HART BOTTLES & JARS

Management Forum

By Francis Chilson
Production Engineer

New Equipment

A new machine known as the polarograph is probably the most interesting piece of laboratory equipment ever devised. Designed by Professor Jaroslav Heyrovsky of Charles University, Prague, this machine analyzes intricate chemical solutions much more accurately and swiftly than a chemist could, and it makes, simultaneously, both a qualitative and quantitative analysis. The sample is electrolytically decomposed in a small cell. The decomposition being electrical, its progress can be read off in the form of a current whose intensity is recorded on a traveling tape. The curves obtained give the relationship between the current which travels through the solution and the magnitude of the applied electromotive force. This machine has already made possible rapid analysis of complex alcohols and other organic compounds.

The machine is not yet commercially available in this country and only two, so far as we are able to learn, are actually in use here, these being in universities.

One can easily visualize a multitude of interesting applications of this equipment. In the control of raw materials it might do away with the detailed procedure necessary to insure conformity to standards and specifications. On essential oils especially it should prove a boon. On the other hand, the use of such a machine will probably impair the inviolability of many formulas because it will enable the chemist to make a very rapid analysis of competing products.

We can, however, envision certain practical difficulties that may not be easy to overcome, and if they can't be overcome, the applicability of the machine may be somewhat more restricted than would appear from a superficial study of its capabilities. In the first place certain organic products, like essential oils, contain compounds (like benzoic acid) which may be present in varying quantities in different oils. It appears therefore that if a certain compound registered a certain curve the length of that curve would naturally show the total quantity present. Hence, if a formula contained twenty oils ten of which contained varying proportions of the same compound, the curve for that compound would show the total quantity present in all the oils and it would leave the chemist without any clue as to the identity of the several oils that contained the compound. In other words the chemist using this machine for analytical determinations would have to be an extremely skilful synthesist. We are assuming, of course, a formula whose several components are not known. Another difficulty to be met is that, in organic work especially, there are a host of compounds that have never been isolated, hence, an analysis might show a series of curves that could not be identified.

As time goes on, however, the machine will undoubtedly prove a boon as the electrolytic intensity of different compounds and different raw materials become known. In this case standards can be plotted which will make analysis simply a matter of comparing the curves with the standards.

Prof. Heyrovsky and his machine

Rotojector Centrifugal

A new field for the application of high centrifugal force to clarification and separation problems is opened up with the recent introduction of the Sharples Rotojector Centrifugal.

There has long been a demand for a centrifugal capable of continuous operation on liquids containing a relatively high percentage of solid material. Up to the present time two distinct types have been available: the bulk centrifugal type, developing low centrifugal force but capable of handling large quantities of solid material: and the high centrifugal force machine, developing very high centrifugal force but having a comparatively low solid-holding capacity, which imposes an economic limitation on those uses of this type of machine where bowl cleaning is a serious labor item where solid content is high.

The Rotojector Centrifugal combines high centrifugal force with the remarkable ability to discharge its solids or bowl cake while running at full speed. This feature eliminates the labor heretofore required for bowl cleaning and permits the use of the Rotojector in places where excessive bowl cleaning would make the Super Centrifuge economically impractical.

The Rotojector Centrifugal is distinguished from the Super Centrifuge in that there is an operating or working chamber in the bottom of the centrifugal bowl assembly which can be operated so as to open the bowl by hydraulic pressure whenever desired, and expel the entire contents of the bowl within ten seconds' time without in any way stopping or slowing down the machine.

WE HAVE
WHAT YOU'RE
LOOKING FOR IN

LIPSTICKS

1. *Smooth Application.*
2. *Non-greasy.*
3. *Truly Indelible.*
4. *Uniform Color.*

Over 17 years of experience in the manufacture of private brand cosmetics guarantees *you Lipsticks which are as you want them.* We can also furnish you with Bulk Powders, *Paste Rouge, Non-Smarting Mascara, Eyebrow* Pencils, and Eye Shadow, all shades. In bulk *or assembled at a considerable saving. For a* pleasant surprise, get our samples and prices.

—◆—

STERLING MANUFACTURING CO.
BELLEVILLE, N. J.

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ADVERTISING . . *Magazine*
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Agfa

BENZYL ACETATE IA

ex Benzyl Alcohol

is indicated wherever an improved quality is desired. Its superiority over ordinary grades is far greater than the few cents' difference in price.

The following superior Agfa aromatics are also worth investigating.

Aldehydes C 8 to C 18
Benzalacetone
Benzyl Cinnamate
Bromstyrol, Improved
Cinnamic Aldehyde
Cuminic Body
Di Methyl Hydroquinone
Floranol
Hydrocinnamic Aldehyde
Indol
Iso Butyl Furyl Propionate
Iso Butyl Salicylate
Methyl Acetophenone
Methyl Anthranilate
Styralyl Acetate
Styralyl Alcohol
Vanillose (Ethyl Vanillin)

New chemical bodies introduced by the Agfa add zest to old odors.

Aldehyde F K	Lilac
Floranol	Rose
Cyclamal	Lily
Jasminum	Jasmin
Bigarol	Neroli
Phyllonal K	Leafy, moss-like effect

Samples of Agfa products on request

GENERAL DRUG CO.

170 Varick Street
New York

907 Elliott Street
Windsor, Ont.

556 W. Congress Street
Chicago, Ill.
Phone: HArrison 7441

The Sharples Rotojector is particularly adapted to the clarification of liquids containing high percentages (up to 10 per cent.) of amorphous and slurry precipitates; the clarification of liquids where the labor cost of bowl cleaning is a serious item regardless of the equipment now used; the separation of liquids which contain large amounts of solids (up to 10 per cent.); the reclaiming of valuable liquids held in slurries; and the removal and recovery of valuable sludges without the labor of bowl cleaning.

The Rotojector Centrifugal which is made by The Sharples Specialty Co., Philadelphia, will find use in a wide variety of applications such as clarifying and dehydrating tar emulsion, creosote, wool grease recovery, packing house products, fish oil, etc.

Dry Filler

Stokes & Smith Co., Summerdale Ave. and Roosevelt Blvd., Phila. have introduced a machine for filling free flowing materials like medicinal salts, psyllium seed, bath salts etc. with extreme accuracy. The machine is fitted with a supply and a measuring hopper. A definitely measured quantity is drawn from the supply hopper into the measuring hopper. The container is held under the discharge spout and the discharge is controlled by a foot trip. The accuracy of weight is guaranteed and the machine may be changed over quickly to suit any kind of container including bags and envelopes. It is a very compact and inexpensive machine. Neat job.

Electric Filler

One of the big scale companies has introduced a filling machine similar to the one below. This one however is controlled by means of a photoelectric cell and it may be used in batching operations, in continuous process work and in installations where raw materials are drawn from suspended bins.

Moisture Determination

Moisture determination can now be made automatically by means of new instrument. All you do is insert the feelers in the sample and read off the moisture content on the indicator.

Filling Cans

Accurate filling of can, barrels and drums is made possible by a little portable unit which connects with the supply lines. A hose is connected with the supply lines and the measuring device in turn is connected with the container by a short piece of hose and a filling nozzle. It is also provided with a temperature and specific gravity dial which enables the unit to compensate for expansion or contraction due to variations in temperature and viscosity. The meter shows the exact amount of liquid which has passed through the measuring device at 60 F. This machine should be a time and material saver for large chemical and supply houses which use many barrels. More particularly it may appeal to manufacturers of ointments and creams because of the possibility of using it as a measuring device in continuous process operation. We don't mean to infer that by using continuous process methods, the operation need be continuous in fact. Houses that make one or two large batches of cream a day might secure greater uniformity and save batching time by allowing the machine to do the weighing off instead of making the batches individually. This would save time weighing off waxes, petrolatum, etc. These materials could be dumped into the melting tanks without weighing them. When required a sufficient quantity could be melted and run down into the mixing tanks through the measuring device of devices. This would make the compounding of cream batches a simple matter of turning valves. Of course there would have to be as many melting tanks as there are ingredients to be melted but this should not, on the average, require more than one or two tanks more.

Time Control

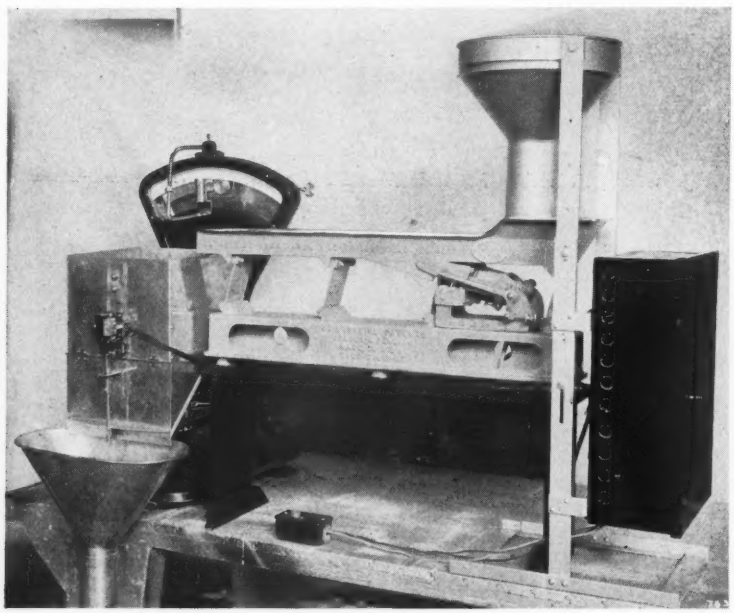
Ross Lyons, superintendent of Elmo Inc., finds that the use of time switches facilitates the making of cream batches and eliminates the human element from mixing time. Mr. Lyons schedules his production so that much of mixing time is done at night and in this manner enables his filling department to get off to an early start by having one or two batches ready for the filling lines the first thing in the morning. The time switch is set for a certain hour by simply turning an indicator. At that hour the power is cut off and mixing ceases. Then in the morning the batches are sufficiently cooled to add perfume which takes but a few minutes and the filling lines are ready to start. Elmo, you know, is the leading tissue cream house of the trade, its position in this respect having been established by the recent national survey made by one of the national agencies.

Hand Capping

U. S. Bottlers Machinery Co., Chicago is extending its line of equipment so that any manufacturer regardless of how large or how small he may be, can get equipment from them suited to his needs and his purse. As an instance of U. S. service to small manufacturers this company has recently introduced hand capping chucks. They come in three types, which with adjustment rings, enable the manufacturer to use them for many different sizes of containers. These chucks prevent sore fingers and are useful for small production and miscellaneous odd lots, which have to be made in nearly every plant.

Third Packaging Conference

From March seventh to tenth will be held at the Pennsylvania Hotel in New York, the Third Packaging Conference. We have been asked to speak on the economics of packaging from a production man's standpoint on Tuesday, March seventh, at 12 o'clock. Naturally, we shall take a swipe at all salesmanagers and advertising men who foist upon trouble-ridden production men new packages that are utterly ridiculous from a production standpoint. So here's your chance to get a shot at the sales department. Send in your package abortion. Give me the



Photoelectric Filler

Modernize!

YOUR PRODUCTS

PROTEGIN

An absolutely odorless lanolin derivative. More than just an absorption base. It is offered in two grades:

PROTEGIN for HORMONE and TISSUE CREAMS having an unusually high water content and absorbability.

PROTEGIN X for COLD and CLEANSING CREAMS having a high oil and fat content.

TEGIN

The GLYCERIN ESTER of MONOSTEARIC ACID. A natural fat which does away with harmful alkaline creams. The simplest way to make beautiful VANISHING CREAMS that *are* stable.

TEGIN is ideal for STABILIZING STEARIC ACID CREAMS without changing the outer appearance of the creams.

COLD CREAMS
SUNBURN CREAMS
VANISHING CREAMS
TISSUE AND HORMONE CREAMS
AGAR & VEGETABLE OIL EMULSIONS
HAIR WAVING PREPARATIONS
FEMININE ANTISEPTICS
EYE WASHES
OINTMENTS

PRESERVATIVES

NIPAGIN M, NIPASOL M, and NIPABENZYL, chemically pure esters of p-hydroxybenzoic acid. Phenol coefficients: 3, 17, and 109. Neutral and non-irritating.

Recommended for their high efficiency in agar emulsions, gum solutions, eye washes, hair waving preparations, vaginal douches, vegetable oil emulsions, skin creams, and in any products which require an antiseptic or preservative.

Manufactured by the Julius Penner A.-G., Berlin-Schoeneberg, Germany.

Have you examined our Odorless ***Lanolin****?*

Th. Goldschmidt Corp.
70 Pine Street New York

DESCOLLONGES FRERES
LYON Established 1904 PARIS

For many years, we have specialized in synthetic Jasmin oils. Our products are known and used the world over.

JASMIN NO. 35

JASMIN DE PROVENCE

JASMIN DE PROVENCE B

JASMIN DE PROVENCE C

Although prices are lowest in our history, we have maintained the same high standard of quality.

BENJ. FRENCH, INC.
New York: 160 Fifth Avenue
Chicago: 549 W. Randolph Street

U. S. P.

ZINC OXIDE

. . . . . by the pioneer manufacturer of zinc products . . . . . .

THE NEW JERSEY ZINC COMPANY
160 FRONT STREET, NEW YORK

Chicago Cleveland San Francisco

story of the production difficulties the new design entailed. I'll use it to illustrate my talk. Naturally all packages will have names covered so that no one can possibly take offense at our remarks and none in the audience will know whose package is being discussed. The packages will simply be used to illustrate how easy it is to increase costs by not taking factory conditions into consideration and by not consulting the plant manager before designs are made. We talked on this subject at Chicago last year and we thought it highly significant that the "artists," the "experts" and most of the advertising men didn't take the trouble to listen in. This is typical of course the artistic temperament cannot be annoyed by such petty details as whether or not a bottle can be labeled by machine, or cartoned or wrapped. That's up to the production man, the poor slob. We concede the fact that we are a lousy speaker and we are utterly sympathetic when anyone runs out on us, but we think that professional designers should learn one or two things about production. It would save their clients money. Well, whether they listen in or not we are going to keep right on plugging the idea that a package is first of all a production, and therefore an engineering unit, before it is anything else. After that it may be an object of art or what have you.

Watch Your Lanolin

Recently we were called upon to solve a discoloration problem. The emulsion contained a lot of lanolin and some color. We never knew so many things could happen to one product at the same time. But finally all difficulties simmered down to the choice of lanolin and the coloring pigment. We think that many cream troubles can be traced to the selection of the wrong grade of lanolin. There's a big story behind this question and we hope some time to discuss it more in detail. We think that lanolin should possess three prime qualities and the first of these is stability. Stability as to color, stability as to odor, stability as to absorbtive properties. Some lanolins look very light and smell but slightly. But will they stay that way? And if they don't, what will happen?

Elmo Expands

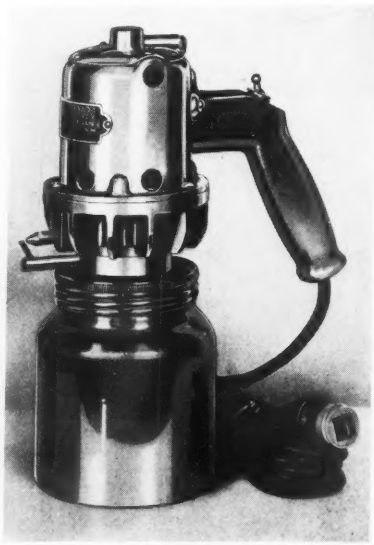
We hope to tell you very soon about a face powder set-up we are designing for this progressive company. If our plans work as tests indicate they will Elmo will have the fastest and most flexible powder unit in the trade. Among many things provided for will be that the unit can work on three shades of powder simultaneously; it will be self cleaning; it will handle a 100 pounds as well as a 1000 without any appreciable difference in efficiency. Of course we are designing this equipment especially for Elmo; nothing like it is on the market.

Plastic Caps

Watch closely the design and composition of plastic caps. Some of them are extremely brittle, due to an excessive amount of wood flour in the material out of which they are made. Some are brittle because of design faults which tend to weaken them materially. We tried several types with a tension device. Under the same tension all of them broke but one. One broke because it contained poor material. Another type broke because of design faults that weakened its structure. The cap that didn't break was made of first rate material and was designed in a manner that added strength to the skirt.

Perfume Spraying

It is a common practice in the manufacture of face powder to incorporate perfume and liquid color by dumping them into an inert medium like precipitated chalk and then rubbing them through a brush sifter. There are, of course, several modifications of this procedure. The practice is not efficient because of the tendency to form lumps which have to be rubbed out before the color and perfume can be dispersed through the base. Today, we have received literature from a manufacturer of an electrical hand-spraying device which would facilitate the incorporation of the perfume and which may eliminate the necessity of rubbing it up first. This sprayer atomizes the oil in such a fine cloud that distribution can be effected without formation of cohesive lumps. We feel so thoroughly convinced of the efficacy of this sprayer that we are planning to use one in a face powder installation that we are engaged in designing for a well-known cosmetic house. This device is inexpensive and very durably constructed, and we shall be glad to put interested parties in touch with the manufacturer.



Cleaning Powder Equipment

As everyone knows, it is a very difficult job to clean powder mixers, sieves, bucket elevators, pebble mills, etc., especially when used for a variety of colors. The usual practice is to brush each piece of equipment out laboriously with dusty brushes. The problem can be facilitated by using an electric hand blower which delivers a very powerful blast of air—powerful enough to dislodge even the most adhesive powder. In order to keep dust down, a dust cloth can be used. We shall be glad to put you in touch with the manufacturers of blowers of this type.

Corrosion Proofing

By a new process non corrosive alloys such as monel, chromium, nickel, etc. can be applied to tanks, kettles or mixers without removing them from their set-up in your factory. In other words if the lining of your kettles become defective you can have them replaced without disconnecting the kettle and shipping it to an enameling or plating plant. This saves time, freight and other expense. The process is comparatively inexpensive and is superior to electroplating. An efficient method of employing this system is to have all tanks, kettles, mixers, etc. relined at once. The company will send men to your plant and corrosion proof your equipment without disturbing the set-up in any way.

You can have your equipment lined with any kind of metal that can be drawn into wire. Even large piping can be relined. The same process is also used to build up worn parts as for instance in line shafting, roller mills, etc. and the "rebuild" is in some cases five times as hard as the original metal. A curious fact is that metal can be sprayed on the head of a match without igniting it. It can also be sprayed on paper, glass or wood. One of the steel tank companies is experimenting with this process with a view to marketing a line of corrosion proof welded steel tanks. It is said that this line of tanks will probably be the least expensive line of corrosion proof tanks on the market. We haven't much specific information yet but we have been promised a detailed report for future publication.

Oily Dusting Powders

It is necessary under certain conditions to incorporate oily or greasy substances in dusting powders. Good product is mixture of 80 parts yellow petrolatum, 20 parts of lanolin and 20 parts water. This is incorporated with dusting powder base. Oily composition may contain about 5% formaldehyde to preserve it and about 1% salicylic acid. Fatty mixture is first melted and part of powder base to absorb it. Product being very intimately mixed and passed through fine, mesh wire screen. Rest of powder is added and product again screened through fine-meshed wire or silk sieve.

Mysore Government Sandalwood Oil

Distilled at our Linden, N. J. Plant from Santalum Album (Linné) Mysore Oil is recognized as the world's standard of quality. When ordering do not merely specify "Sandalwood Oil U. S. P." but also insist upon original containers with the Mysore Government label thereon.

"Union Bulgare" OTTO of ROSE

A strictly pure Rose, produced in the distilleries of the Union Générale des Coopératives Bulgares and guaranteed by the Bulgarian Government.

Offered in original sealed containers only, direct to the consumer by:

W. J. BUSH & CO., Inc.

New York Chicago National City, Cal.

W. J. BUSH & CO., (Canada) Limited

Why so many leading cold-cream manufacturers USE

BEEHIVE BRAND BEESWAX

First, because Beehive Brand Beeswax is pure—the finest that money can buy. In many cases, a smaller amount is used in the cream than is required of ordinary beeswax, and with better results.

Our own buyers select the finest grade of crude beeswax. It is critically examined at the source and again carefully tested for purity and quality by our chemists. Beehive Brand is then sun-and-air bleached—a method that is slower and more costly but infinitely better than ordinary chemical bleaching. This work is done by and under the direction of veterans, many with more than 45 years of service.

Specify Beehive Brand for your next order of beeswax.

WILL & BAUMER CANDLE CO., Inc.
Syracuse, New York Est. 1855

SPERMACETI CERESINE
GLYCERINE STEARIC ACID RED OIL

STEARATES

ZINC STEARATE
CALCIUM STEARATE
ALUMINUM STEARATE
MAGNESIUM STEARATE

Stearate of Magnesia
Light. Great Adhesiveness. Pure White. Immeasurable Fineness. Heavy if desired. Dusts out under the puff like the finest pollen.

Stearate of Zinc
Odorless. Impalpable. Pure White. Water Resisting. Great Adhesiveness. Light or Heavy as desired.

We are manufacturing the foregoing on a large scale. Deliveries in any quantity from one barrel to a carload. Prompt shipments.

STOCKS CARRIED: Chicago, St. Louis, San Francisco, Los Angeles, Kansas City, Mo., Des Moines, New Orleans

FRANKS CHEMICAL PRODUCTS CO., INC.
55—33RD STREET BROOKLYN, N.Y.
BUSH TERMINAL, BLDG. NO. 9

Cosmetic Therapy

(*Continued from page 118*)

our trade, but research by its very nature takes nothing for granted. The present status of cosmetics as a whole, on the scientific side, is such as to justify a defensive attitude, looking to the correction of known unfavorable physiological consequences associated with cosmetics, rather than an active, prematurely invasive attitude, looking to conversion of the public mind to acceptance of remedial claims.

"Drugs and cosmetics are both sold in pharmacies, but handkerchiefs, alarm clocks, candies, photographic supplies, lunches, etc., etc. also hobnob there together. I cannot accept the miscellany born of merchandising exigencies as justificatory of confusion in our thinking and literature."

Frank C. Gephart
of Frank C. Gephart Co.

"I THINK that eventually the cosmetic industry, which is growing very rapidly, will find itself very highly specialized, perhaps divided into at least two groups, one, that of beautification and the other of therapeusis. This division would be automatically effected by control under the Federal Food and Drug Act, an eventuality which I feel is sure to come, and perhaps soon. Regulation of this character, if sanely administered, would do much to stimulate real scientific progress in cosmetics and would eliminate much of the unfair product competition which infests the industry today, just as was done with Foods and Drugs in 1907.

"Real progress cannot be made however, until the 'kitchen' type of research passes into the discard and until many of the cosmetic manufacturers are in a position in respect to personnel, to be able to judge and properly evaluate the many raw materials with which they deal and to conduct real research work.

"I am firmly of the belief that there is no substitute for quality, honestly manufactured merchandise and truthful advertising, and that any product, whether it be a cosmetic or a suit of clothes, must fulfill its anticipated functions in order to hold its place on the market."

Storm Warnings

(*Continued from page 114*)

the manufacturers of men's toiletries. Grocery stores stepped into the cigarette business in no uncertain manner, aided in their invasion by the increase in smoking women.

Manufacturers of toiletries interested in the retail drug trade as their main distributors did not look with favor upon the chain cigar stores as distributors of their products. This resulted in a rise of private brand merchandise on the part of the tobacco chains just as the chain grocers are now producing their own tooth pastes and other products in the cosmetic line.

As the chaotic condition of the present depressed economic period progresses, distribution is becoming so confused that the manufacturer knows less definitely just what types of retailers are the main distributors of his products. This means that many manufacturers—particularly those whose chief business lies in widely advertised specialties readily purchased by consumers—face a very critical decision. They may decide that the retail druggist, by dissipating his sales energy in such alien fields of interest as books, toys, foods, etc., has sacrificed all claim to loyalty, and that self-protection demands acceptance of any type of retail outlet which enters the field with an acknowledged following of customers.

This decision would be particularly strengthened if this new distribution fostered and built up new competing brands. An example of how powerful pressure of this kind may become, will be recalled in the reluctance with which many manufacturers placed their products on sale in Woolworth's and other five and ten cent stores.

On the other hand, the manufacturers may decide that their best interest lies in fighting to a finish through the normal distributive channels of the retail drug trade. For this decision it may be said that in spite of increasing private brands, substitution, price-cutting, and other evils, which are now the every-day troubles of the manufacturer, his product is part of the department which is the mainstay and the distinguishing characteristic of the retail pharmacy. In tobacco, grocery, and stationery stores, these products are at best, orphans, with the practical certainty of Cinderella treatment.

In any event, advertising must do double duty in the future for many manufacturers, and undoubtedly some cases will exist in which the answer to the present dark clouds will be an increase in advertising until the storm blows over.

Beauty Clays

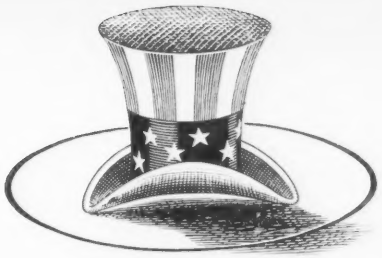
(*Continued from page 124*)

recommended therefore that they be packed only in well sealed jars with foil and cork liners. Should it prove difficult to keep this product indefinitely the acacia may be replaced by a softner mucilage or pectin.

MILK PACK

Powdered Milk (skim milk)	30 lbs.
Tri Calcium Phosphate	40 "
Glycerin	20 "
Tincture Benzoin	4 ozs.
Para-oxy-benzoic-acid-ester	2 "
Zinc Peroxide	10 "

Procedure: Mix tri calcium, milk, and zinc peroxide. To the glycerine add tincture benzoin, preservative and perfume, then while mixing slowly mix in dry materials. Other materials used include starch, sodium perborate, thorium hydroxide, magnesium oxide, iso-propyl alcohol, etc., the principal consideration being to develop a clay base of a consistency that will permit smooth application, that will not dry out in the containers but which will permit ready evaporation when applied to the skin.



AMERICAN INSURANCE

for that Dentifrice of yours

You buy your insurance in this country because it means better service and added assurance of satisfaction.

Buying your precipitated chalk here at home will likewise assure you better service and entire satisfaction.

Snow Top American Precipitated Chalk means insurance of purity, grit freedom, snow white color. It means added assurance of maintained quality in your dentifrice.

Year in, year out, Snow Top runs uniform to specification---*your* specification.

Manufacturers of leading dentifrices use Snow Top and rate it completely satisfactory.

May we submit sample and more information?

INDUSTRIAL CHEMICAL SALES COMPANY, INC.
230 Park Avenue **New York**

MEET THE BOYS

at the Drug, Chemical and Allied Trades Annual Dinner, Waldorf Astoria, Thursday, March 16th. The year's high spot opportunity to rub elbows and swap ideas with good fellows in your own fields.

PRECIPITATED CHALK

SNOW TOP

CRETA PRECIP U. S. P.

CITRIC ACID

PFIZER QUALITY

EIGHTH ANNUAL N. Y. DRUG TRADE DINNER

An enjoyable program with drug, chemical and allied trade associates from every section of the country--March 16th at the Hotel Waldorf Astoria.

You are urged to send your reservations promptly to Ray C. Schlotterer, Secretary, Drug, Chemical and Allied Trades Section, New York Board of Trade, 41 Park Row, New York.

CHAS. PFIZER & CO. INC.
MANUFACTURING CHEMISTS
NEW YORK
81 MAIDEN LANE
CHICAGO
444 W. GRAND AVE.

CITRATES

News

Associations

Dinner Plans

Plans for the Eighth Annual Drug Trade Dinner to be held at the Waldorf-Astoria Hotel, New York, March 16, are progressing rapidly under the direction of F. J. McDonough, Chairman of the Drug and Chemical Section of the New York Board of Trade under whose auspices the dinner is being held.

Charles L. Huisking, president of Charles L. Huisking & Co., is to be toastmaster at the dinner. Speakers of prominence will be in attendance. The reception before the dinner will start at 6.30 P. M., and will last until the time of the dinner which is usually about 8.00 o'clock.

Charles L. Huisking
Toastmaster

Victor E. Williams
Reception Head

Victor E. Williams, of Monsanto Chemical Works, is the chairman of the Reception Committee, which is busy arranging for the comfort of the guests who are to be in attendance. They consider that their task will be a large one since the number of 750 who were in attendence at the last dinner, will most likely be exceeded by 250 this year bringing the anticipated attendance up to 1,000 or more.

Officials of all national retail, wholesale, and manufacturing associations have been invited to attend, as well as officials of sectional associations as far west as Chicago. A very large majority of these officials have indicated that they will be on hand for the dinner.

One official of a large company when interviewed last week said that he did not believe that anyone in any way connected with the drug, cosmetic, chemical insecticide, or any other branch could afford to miss the dinner. Probably during the next two weeks there will be talk of little else in and around New York.

N. W. D. A. Chairmen Named

Carl F. G. Meyer, president, National Wholesale Druggists' Association, has announced the following committee chairmen for 1933: Arrangements and entertainment, Eli Lilly, Indianapolis; Attendance, Edward Zink, Indianapolis; Accounting, Austin R. Waite, Toledo; Active membership, W. J. Mooney, jr., Indianapolis; Associate membership, C. A. Loring, Boston; Credits and collections, Lee Wilson Hutchins, Grand Rapids; Employment and welfare, Kayton Smith, Savannah; Insurance, Peyton Hawes, Spokane; Legislation, William Jay Schieffelin, jr., New York; Memorials, Harry J. Schnell, New York; Manufacturers, J. T. Woodside, Chicago; Proprietary goods, E. P. Schrader, St. Louis; Research and relations, J. L. Freeman, Dallas; Rates and routes, P. C. Magnus, New York; Salesmen and selling methods, J. B. Ashley, San Francisco; Special lines, A. C. Fitschen, Oklahoma City; Druggists' Research Bureau, A. K. Mayer, Indianapolis.

Calif. Cos. Ass'n Fights Laws

The California Cosmetic Association held a meeting February 8 to discuss plans for opposing proposed legislation which would affect sales of cosmetics through demonstrators. The association has issued the following bulletin describing this proposal and points out that although this is a local legislative problem, every manufacturer selling in California is affected.

"There has been introduced at Sacramento, Assembly Bill No. 535, (By Eleanor Miller)—"An act to amend the present—Cosmetology Act."

"Included in its provisions is a measure to place state control over Demonstrators, with the usual license, (and no doubt fees, etc.) A brief of the section follows:

"Section 1—(G) The word "Demonstrator"—is a person who, for the purpose of sale of creams and cosmetics demonstrates the application thereof without charge.

"Section 19. Special license shall be issued to demonstrators—under such regulations as the board shall make—. The use of cosmetics—on any person other than the demonstrator herself—(or a paid subject) shall be construded as practicing "Cosmotology" (which only a beauty operator may do).

"Section 3. No person shall be permitted to practice cosmetology—in any residence—unless a registered cosmotologist—*employed* by an establishment licensed under this act."

Magnus Heads Trade Board

Percy C. Magnus, President of Magnus, Mabee & Reynard, Inc., has been elected president of the New York Board of Trade. Mr. Magnus has just completed two years service as chairman of the Drug and Chemical Section of the New York Board of Trade, and his elevation to the head of the Trade Board as a whole is regarded as a signal honor both to him and to the Drug and Chemical Section of the Board. S. W. Fraser, of Burroughs Wellcome & Co., Inc., has been elected a vice-president of the New York Board of Trade.

P. C. Magnus

Geo. Armour Heads Balt. Ex.

Baltimore Drug Exchange has elected the following officers: president, George M. Armour; vice-president, McCormick & Co., Inc.; first vice-president, Charles P. Muth, Muth Brothers & Co.; second vice-president, James Carey, James Bailey & Son; secretary, William J. Lowry, Gilbert Brothers & Co.; and treasurer, J. Emory Bond, Le Roy Oldham & Co. The executive committee named includes the officers and the following: William Graham, William Graham & Co.; Philip I. Heuisler, Emerson Drug Co.; and Lowry Drug Co.

Hires Heads Phila. Ex.

Philadelphia Drug Exchange has elected the following officers: president, Harrison S. Hires; vice-president, Benjamin S. Thorp; secretary (re-elected), Joseph W. England; treasurer (re-elected), F. L. Bodman; directors (re-elected), J. Mervin Rosenberger, H. K. Hineline, H. H. Whyte, Walter V. Smith and E. L. Brendlinger; (new members), John F. Belsterling, Raymond G. Anderson and Paul S. Pittenger.

Mich. Toiletries Assn. Meets

The Michigan Toiletries and Extract Association held its second monthly meeting at the Masonic Temple, Thursday, February 9, following an excellent dinner at which "Roy" L. Clarke, Hazel-Atlas Glass Co., volunteered to foot the expense for the crowd. His benevolence was so sudden and overwhelming that its full significance was not realized until after it

Maison De Navarre

was too late. In the excitement Maison D. De Navarre in his childish manner, of which he is trying so hard to grow out of, could not discern the difference between his finger and a dinner roll, while buttering with a knife whose performance was rather unusual for hotel knives. These two were the only mishaps during the dinner.

The main business of the meeting was the adoption of a constitution and by-laws. Meeting was called to order by President pro tem Maison De Navarre, who appointed C. R. Rollings, Seely Mfg. Co., as secretary to serve in Mr. Stevenson's, Givaudan-Delawana, absence from the city. Minutes of the previous meeting were read and approved. "Otto" Wegner of Nelson Baker & Co., gave a long report on a constitution and a set of by-laws. With slight changes, the whole were approved and adopted to guide the new association. For vice-president the election went to "Chuck" R. Rollings of Seeley Mfg. Co. Having served in many capacities of the various associations with which he is connected, Mr. Rollings understands organizations and their many intricate workings. Mr. Rollings brought with him a new member, F. J. Hoxie of his company.

Elections were made to the Executive Committee of two officers, Mr. A. R. Vicary of Mark Allen & Co., and Mr. "Otto" Wegner of Nelson-Baker & Co. A note of acknowledgment was sounded to Dr. Lyons, of Parke, Davis & Co. who invited the members of the Association to hear Dr. Marston T. Bogert of Columbia University, while lecturing in Detroit under the auspices of the American Chemical Society. Dr. Bogert will talk on "Around The World in Search of Perfume." Dr. Lyon's invitation came as a letter to the Secretary of the Association.

Among the new members present were, F. J. Hoxie, Seely Mfg. Co.; E. P. "Irish" O'Rourke, Illinois-Owens Glass Co.; Don M. Dickerson, Jr., of the Dickerson Co.; H. W. Immerman, president Bluekamel Mfg. Co.; "Roy" L. Clarke, Hazel-Atlas Glass Co.; A. R. Vicary, Mark W. Allen & Co.

The next regular meeting will be held at the Masonic Temple, March 9th.

Advertisers Seek Ethics Code

A joint committee has been formed by the Association of National Advertisers, the American Association of Advertsing Agencies and a representative group of publishers to formulate plans for reviewing cases considered as violating sound advertising ethics and standards.

A tentative plan of operation provides, in brief, for the utilization of the National Better Business Bureau as the machinery for handling violations of the code. If no satisfactory agreement can be reached between the National Bureau and the advertiser, agent or publisher, an appeal can be made to the review committee who, after proper study of the facts, will render an opinion.

Flavoring Extract Meeting

Flavoring Extract Manufacturers' Association will hold its annual convention at the Knickerbocker Hotel, Chicago, June 19 to 21.

F. W. D. A. to Meet in N. Y.

Federal Wholesale Druggists' Association will hold its mid-year meeting, March 7 and 8, at the Waldorf-Astoria Hotel, New York.

People

Haskell Heads Alcohol Inst.

Glenn Haskell, first vice-president of the U. S. Industrial Alcohol Co., New York, has been elected president of the Industrial Alcohol Institute, succeeding

Glenn Haskell

S. S. Neuman. Other officers are: vice-president, A. K. Hamilton, Pennsylvania Sugar Co.; treasurer, R. H. Grimm, of the American Commercial Alcohol Corp.; executive secretary, Dr. Lewis H. Marks, who has held this position since 1926.

Statham in Industrial's Chicago Office

Richard N. Statham has joined the staff at the Chicago office of the Industrial Chemical Sales Co., Inc., New York. He is a graduate of Dartmouth College and was employed at the company's laboratory at the Covington, Virginia plant before becoming affiliated with the Chicago office.

He is the son of Noel Statham, president, Industrial Chemical Sales Co. Inc., who has been known for many years as a pioneer in the field of electro chemistry. The latter took out patents covering the manufacture of the company's product, "Nuchar," and also covering "Snow Top Precipitated Chalk."

Bauer Joins Jamieson

J. L. Bauer, formerly manager of the Anacin Co. and Van Ess Laboratories, which are subsidiaries of American Home Products, and foreign sales manager of Affiliated Products, Inc., comprising Kissproof, Inc., Edna Wallace Hopper, Inc., Louis Philippe, Inc., Neet, Inc., and Jocur, Inc., has joined C. E. Jamieson & Co., Detroit, as sales promotion manager.

Dr. Fain Joins Snell

Dr. J. Mitchell Fain, Consulting Chemist, is now associated with Foster D. Snell, Inc., Brooklyn, N. Y.

Vivaudou Joins Vadsco

Vadsco Sales Corp., Long Island City, has announced that Victor Vivaudou, creator of the Vivaudou line of cosmetics, has become associated with that company and will devote his time to new package ideas and new conceptions in odors.

H. J. Ahles Joins Stillwell

Harry J. Ahles, formerly Middle West representative, Ungerer & Co., New York, has been elected vice-president, Arthur A. Stillwell & Co., Inc., New York. He will be in charge of the company's Chicago office. Herbert W. Farrell is president and treasurer of the company.

Eiklor Joins General Chem.

Leonard F. Eiklor has become associated with the Baker & Adamson division of General Chemical Co., New York. He was formerly, manager of sales of the fine chemical department of Pfaltz & Bauer, Inc., New York, and before that was in charge of the chemical department, directing sales and purchasing, of the Central Scientific Co. of Chicago.

CLOCKS VARY

but NOT *du Pont Aromatics*

You can depend on their absolute purity and uniformity at all times.

GERANIOL EXTRA

The distinguishing features of this du Pont Aromatic are its uniformity, freedom from any sharp by-odors, and its delicate, rose-like odor. Improved processes of manufacture and the most highly skilled technical direction insure its chemical purity.

BENZOPHENONE CRYSTALS

They are an excellent fixative. And embody the clear fresh odor note of the rose in a pure white crystalline form. These du Pont Crystals will not discolor and are absolutely stable. Even with these outstanding features Benzophenone Crystals are priced well within the cost range of any toilet or liquid soap formulae. These Crystals are characterized by their high boiling point.

CITRAL

Is water-white and free from Methyl Heptenone. And like all other du Pont Aromatics, added refinement in manufacture, together with complete laboratory control, adds value to *your* product.

DU PONT AROMATICS

E. I. DU PONT DE NEMOURS & CO., INC.
Fine Chemicals Division
260 WEST BROADWAY, NEW YORK, N. Y.
7 South Dearborn St., Chicago, Ill.
SOLE DISTRIBUTORS FOR Société Usines Chimiques, Rhône—Poulenc, France

MAIL COUPON FOR SAMPLES AND FURTHER INFORMATION

D-2

E. I. DU PONT DE NEMOURS & COMPANY, INC., Fine Chemicals Division, 260 W. Broadway, New York

Gentlemen. PLEASE SEND ME SAMPLES of your_____

_____ I want to test them for myself. It is understood this does not obligate me in any way.

Name _____

Address _____

City _____ *State* _____

Hopkins Heads Col. Co. Assn.

J. L. Hopkins, president, J. L. Hopkins & Co., New York, has been elected president of the Columbia County Association. Other officers elected were: William B. Daley, Jr., secretary; John J. Rockefeller, treasurer.

J. L. Hopkins

The Columbia County Association is one of the oldest and among the most important associations of its kind in the State of New York.

B. T. Bush Joins Naugatuck

Naugatuck Chemical Co., New York, has announced that Burton T. Bush, formerly president, Bushfield, Inc., has been placed in charge of the company's aromatic sales service department, Bushfield, Inc., formerly acted as exclusive selling agent for Naugatuck.

Harper Representing Ungerer

Ernest J. Harper, formerly of the firm of Harper-Mantle Company, Toronto, is now handling Ungerer & Company's line of essential oils, synthetics, aromatic chemicals and perfumery raw materials in Canada.

Prior to its dissolution at the end of 1932, the Harper-Mantle Company represented Ungerer & Co. in Canada, so that he is familiar with the Ungerer products and the Canadian trade. His address is 62 Lombard St., Toronto.

Bancroft Gets Nichols Medal

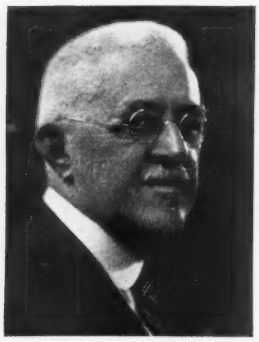
The William H. Nichols Medal of the New York section of the American Chemical Society for 1933 has been awarded to Dr. Wilder D. Bancroft, professor of physical chemistry at Cornell University, by the medal committee headed by Dr. Walter S. Landis.

The award, one of the major honors in chemical science, goes to Professor Bancroft for his work on the application of colloid chemistry to physiological problems, particularly insanity, in which he has advanced scientific proof that dementia and drug addiction are curable chemically.

The medal will be presented to Professor Bancroft at a meeting of the New York section in the Electrical Institute Auditorium, Grand Central Palace, March 10. "Protein Therapy" will be the subject of Professor Bancroft's medal address.

Biebinger Wed 50 Years

Oscar L. Biebinger, president of the Mallinckrodt Chemical Works, St. Louis, and Mrs. Biebinger celebrated their golden wedding anniversary February 8, at the Arlington Hotel, Hot Springs, Ark. A number of their friends joined tham at Hot Springs for the occasion. Mr. Biebinger has been with the Mallinckrodt company since 1888. He became secretary in 1893 and was elected to the presidency March 16, 1925.



Oscar L. Biebinger

Dobson Appointed Colonel

J. G. Dobson, president of the Ironized Yeast Co., Atlanta, Ga., has been appointed a colonel on the staff of Georgia's new Governor, Eugene Talmadge.

Bertram Joins Loeser

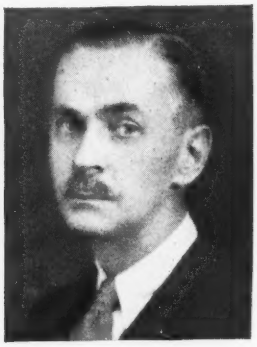
H. Henry Bertram, president of the Associated Manufacturers' of Toilet Articles, has resigned his position with A. P. Babcock Co., to accept a position as head of the toilet goods department of Frederick Loeser & Co., Brooklyn, N. Y., department store. Mr. Bertram has tendered his rseignation as president of the A. M. T. A., but action by the Executive Committee of the Association is still pending. Mr. Bertram is said to be retaining his financial interest in the Babcock company.

H. H. Bertram

Sanders With Texaco

Frank P. Sanders, well-known chemical sales executive, has been appointed manager of chemical sales of Texaco Salt Products Co., and is now engaged in directing and organizing sales for this potent subsidiary of the Texas Oil Co.

Born in England and educated in Southwell College, Mr. Sanders worked for some years for the United States Metal Refining Co. In 1915 he entered the chemical industry by joining the sales department of the Hooker Electrochemical Co. In 1922 he went with H. J. Baker & Bro., where he conducted their drug and chemical business with conspicuous success until his recent resignation to join Texaco. Mr. Sanders has also travelled extensively in this country, Europe and South America.



Frank P. Sanders

Texaco Salt Products Co. is now engaged in an extensive development program at Tulsa, Oklahoma, where the company is producing Sodium Chloride, Calcium and Magnesium Products, Bromine and Bromides, etc.

Mr. Sanders now resides at Tulsa, Oklahoma.

Marriages

JAMES McINNESS

James McInness, Rossville Commercial Alcohol Corp., New York, to Alberta Fowler.

H. W. KRAAZ

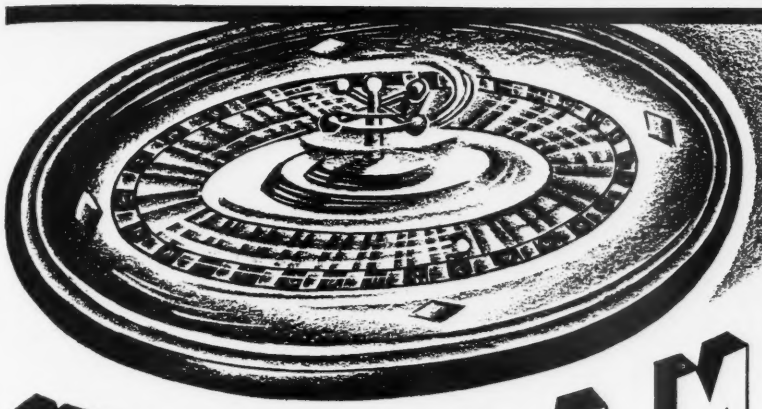
Heinz Waldemar Kraaz, vice-president, Schliemann Companies, Inc., New York, to Adrienne Marie Claude.

A. J. WILCKENS

A. J. Wilckens, Helfrich Laboratories, New York, to Margaret Waughop.

Dr. Leonard Joins Powell

Dr. Mortimer D. Leonard, formerly entomologist for Porto Rico and State entomologist for New York, has become associated with John Powell & Co., New York.



WHY GAMBLE?

YOU CAN'T WIN!

It is unnecessary to gamble with unstable and uncertain sources of supply when the very finest raw materials can be purchased today at the lowest prices in the history of the essential oil industry. Why take a chance? Buy perfume materials and dependable oils from Fritzsche Brothers---known the world over for integrity, quality, dependability and service for more than half a century---at prices no higher than you pay for inferior oils.

PERFUMES FOR:

Powders
Creams
Soaps
Face and Hand Lotions
Cosmetics

Samples and full details sent upon request

FRITZSCHE BROTHERS INC.

Proprietors of
PARFUMERIES DE SEILLANS
Seillans, France

Sole Agents in U.S. and Canada for
SCHIMMEL & COMPANY
Miltitz (near Leipzig) Germany

118 W. Ohio St.
Chicago

78-84 BEEKMAN ST.
NEW YORK

Fritzsche Bros. of Canada, Ltd.
77-79 Jarvis St., Toronto

Dr. Dunning Fellowship

Dr. H. A. B. Dunning, president, Hynson, Westcott & Co., Baltimore, and former president of the American Pharmaceutical Association, has permanently endowed the fellowship in chemistry at the Johns Hopkins University named after him on the basis of $1,000 a year.

Companies

Dow Drug Receivership

Dow Drug Co., Cincinnati, has announced that the Receivership involving its subsidiary corporation in Pittsburg (The Dow Drug Company of Delaware) has been lifted as of January 31.

The statement adds that "the receivership proceedings in Pittsburgh were brought by this company against the Delaware corporation, upon a claim against that company held by the Ohio corporation.

"At the time of the lifting of the Receivership we have sixteen stores in operation in and about Pittsburgh and it appears that we will continue to operate substantially all of these stores, we having negotiated modification of our leases for these properties that, we believe, will permit us to operate our Pittsburgh Division without loss."

Vick Financial Elects

Vick Financial Corp. has elected the following officers: chairman of the board, H. S. Richardson; president, W. Y. Preyer; chairman of the executive committee, E. W. Stetson; vice-president, treasurer and manager, James Rattray; secretary, C. F. Germain.

New Mercurial Maker

Nevada Testing Laboratory, Reno, Nev., has been formed with the intention of manufacturing mercurial salts on the Pacific Coast. H. E. Loufek, vice-president, Castle Peak Quicksilver Co., Virginia City, Nev., and H. G. Walker, chemist and metallurgist, are organizers of the new company.

The sales plans of the company have not as yet been definitely formulated. Undoubtedly the concern plans to go after Pacific coast business first, with agents in San Francisco, and Los Angeles and with a view of placing the material on the Eastern market within a short time.

R. & H. Du Pont Offices

R. & H. chemicals department, E. I. du Pont de Nemours & Company, Inc., Wilmington, has opened a Charlotte, N. C., office at 300 West First Street, with R. M. Levy as manager.

The Cleveland sales office of the R. & H. chemicals department, has been removed to 1235-6 Guardian Building. Carl Dittmar is manager.

Squibb Building Officers

E. R. Squibb & Sons announce that officers of the Jones Estate Corporation—owners of the Squibb Building, New York, have been elected as follows: John N. Staples, Treasurer of E. R. Squibb & Sons, President; Lowell P. Weicker and James C. Lewis, Vice-Presidents; B. G. Smith, Treasurer and Charles S. Gage, Secretary. Board of Directors consists of: Carleton H. Palmer and Theodore Weicker, President and Executive Vice-President, respectively of E. R. Squibb & Sons, John N. Staples, Lowell P. Weicker, James C. Lewis and B. G. Smith, all of Squibb, and Robert T. Swaine, and W. Kintzing Post, representing Mary Mason Jones Estate.

New financing includes the following:

Senior issue of mortgage bonds of $4,365,000 which goes to trustees of Mary Mason Jones estate in payment for land and $635,000 to holders of a mortgage, secured by the land; total of prior bonds therefore is $5,000,000.

Second trust 20-year 6 per cent. bonds of $1,450,000, of which amount $450,000 goes to holders of old leasehold bonds. The re-adjustment calls for delivery of $100 in new junior securities plus ten shares of new common stock for each $1,000 of old leasehold bonds.

Of second trust bonds, E. R. Squibb & Sons purchases $1,000,000 for cash, thus applying funds for liquidation of taxes, interests and penalties and all arrearages and necessary working capital.

Common stock of 180,000 shares, distributed as follows: 45,000 shares to old leasehold bondholders, 27,000 to the Mary Mason Jones Estate and 108,000 to E. R. Squibb & Sons.

Cellophane Patent Suit

Alleging infringement of moistureproof "Cellophane" patents, the Du Pont Cellophane Co. has filed suit against the Sylvania Industrial Corp. in the United States District Court for the Eastern District of Virginia, at Richmond. The manufacturing plant of the defendant is located at Fredericksburg, Va.

The bill of complaint alleges infringement of patents covering moistureproof material, moistureproof composition, apparatus for coating and method of coating, which include letters patent 1,737,187, 1,826,696, 1,826,697, 1,826,698, and 1,826,699, all of which relate to the manufacture of moistureproof "Cellophane."

Winarick Buys Herpicide Co.

Ar. Winarick, Inc., New York, manufacturer of "Jeris Hair Tonic" and allied products, has purchased the Herpicide Co., Detroit. Floyd H. Pepper, sales manager of the old company has become executive vice-president and sales manager of the new Herpicide Co., and the entire business and plant has been moved to New York.

Hinze to Handle "Admiracion"

Hinze Ambrosia, Inc., New York, has been appointed sole distributor for "Admiracion," a hair preparation manufactured by the National Oil Products Co. Inc., Harrison, N. J.

Norwich Not Member

Turner F. Currens, vice-president, Norwich Chemical Co., states that Norwich is not a member of the Alcohol Products Manufacturers Association, of New York, as stated in our Jauuary issue.

Amer. Medicine Co. Sold

The interest of Lewis-Waetjen Agency, Inc., and Gerald H. Waetjen in the American Medicine Co., has been sold to Mrs. Martha M. Lewis.

Coignet Mergers N. Y. Agency

Coignet Chemical Products Co., New York, has announced that it has merged its agency in New York with the International Selling Corp. The new name and address is International Selling Corp., Coignet Chemical Products Division, 70 Pine st., New York. Telephone Whitehall 4-7490. W. E. Miller will continue to supervise the work of this division and his entire organization has been merged with International Selling.

Wildroot to Build in Buffalo

Wildroot Co., Buffalo, plans to establish a plant at Erie, Ont., to supply the Canadian market and a Canadian firm, Wildroot, Inc., has been formed to conduct the business.

Ingram's Shaving Cream Cut

Bristol-Myers Co., New York, has announced a reduction in the retail price of "Ingram's Shaving Cream" from 50 cents to 35 cents. The wholesale price has also been lowered from $4 to $2.80 a dozen. Reductions apply to both tube and jar.

J. & J. To Build in Chicago

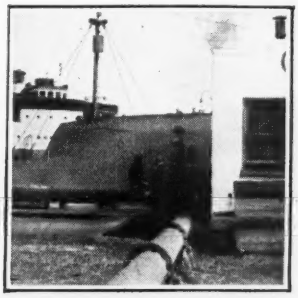
Johnson & Johnson, New Brunswick, is reported to be planning the erection of a plant in Chicago, involving a projected expenditure in land, buildings and equipment of over $750,000.

Ungerer & Co. Elects

At the annual meeting of the directors of Ungerer & Company, New York, the following officers were elected for the ensuing year: Frederick H. Ungerer, president; Charles Fischbeck, vice-president and treasurer; Kenneth G. Voorhees, vice-president; and Milton S. Butler, secretary.

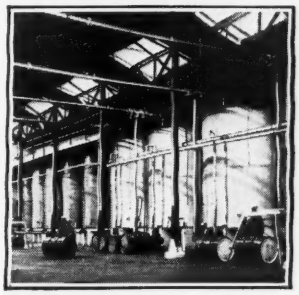
• U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY •

U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY OF U. S. INDUSTRIAL ALCOHOL CO.



Four company-owned steamers bring molasses direct to plants.

Largest assembly of alcohol distilling columns in the world.



Battery of individual denaturing tanks for preparing each formula.

U. S. I. A.'s

Service to Industry . . .

BUREAU OF REGULATIONS

AT each of the company's twenty-three local headquarters—and at each of its six manufacturing plants, is a representative who is well informed on the regulations governing the use of industrial alcohol.

This representative is a man of long experience in the alcohol industry and is fully equipped to answer questions on the subject of industrial alcohol regulations.

He can be relied upon for sound advice.

He is always glad to assist manufacturers and others in making their applications for alcohol permits; permit renewals; and supplemental applications to add new products, change formulae, increase gallonage, or change address of permittee.

A complete and up-to-date record of all industrial alcohol regulations and their amendments is maintained in the main office at New York for the benefit of concerns seeking more detailed information.

Our size and importance in the industry are among the leading factors . . . not interpreted in the terms of stills, tanks or tonnage . . . but measured by the service and technical facilities we provide as part of our sales transaction.

We invite you to consult our local headquarters or the main office whenever information upon regulations is required. U. S. Industrial Alcohol Co., 60 East 42nd Street, New York, N. Y.

29 CONVENIENT DISTRIBUTION POINTS

Manufacturing Plants

New Orleans	Newark	Baltimore
Buffalo	Anaheim	Peoria

Branch Sales Offices & Warehouses

Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, O.; Cleveland, O.; Dallas, Tex.; Detroit, Mich.; Indianapolis, Ind.; Kansas City, Mo.; Los Angeles, Cal.; Louisville, Ky.; Memphis, Tenn.; New York, N. Y.; New Orleans, La.; Philadelphia, Pa.; Pittsburgh, Pa.; Portland, Ore.; St. Louis, Mo.; St. Paul, Minn.; San Francisco, Cal.; Seattle, Wash.

U. S. INDUSTRIAL ALCOHOL CO.

WORLD'S OLDEST AND LARGEST MANUFACTURER OF INDUSTRIAL ALCOHOL

All standard specially denatured alcohol formulae stocked at all warehouses

Makers of PYRO . . . the Standard Anti-freeze and general utility Denatured Alcohol

U. S. INDUSTRIAL ALCOHOL CO.

• U. S. INDUSTRIAL CHEMICAL CO. INC. •

U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY OF U. S. INDUSTRIAL ALCOHOL CO.

New Canadian Plants

New plants of this industry which have recently been established in Canada are those of John Wyeth & Bros., Philadelphia, at Walkerville; Oxzyn Co., New York, at Walkerville; the Hemafil Co., in conjunction with C. E. Jamieson Co., at Walkerville; the Windsor Chemical Co., at Windsor; the Vick Chemical Co., Philadelphia, in connection with Sterling Products, Ltd., Windsor; Gerber Products Co., Fremont, Ohio, in connection with the Fine Foods of Canada, Ltd., Tecumseh; and the Rev. Prescription Co., Chicago.

Monsol, Ltd., Formed

Monsol, Ltd., has been formed in England to take over the manufacture and sale of drug products including "Monsol" and "Anasol."

Squibb Increases Potency

E. R. Squibb & Sons have increased the vitamin potency of their plain cod liver oil as stated on the label. Potency in vitamin A is now given at 125,000 units per 100 grams, against a former statement of 70,000 units per 100 grams. Vitamin D potency is now given at 50,000 units per 100 grams, against a former statement of 26,000 units per 100 grams. It is claimed that the oil has been running at or above these potencies for the past year, but only now has Squibb felt that these potentcies have been maintained for a sufficient length of time to guarantee consistent of production of an oil of such high potency.

Liggett Obtains Rent Cuts

The Liggett Landlord National Protective Committee reported on January 17 to Judge Welsh in the Federal district court, Philadelphia, that the committee had secured from the landlords consent to a reduction in Liggett rentals amounting to approximately $1,000,000. The committee indicated that with a little more time it probably would be able to secure the full amount of rent adjustments estimated by Liggetts as necessary for its needs during 1933. The committee discussed with the court the possibility of summoning landlords who thus far have failed to co-operate and the court granted a motion for continuance of the action until February 23, when it is hoped sufficient consents to the plan will have been obtained to justify its being put into effect.

Schieffelin Buys Halper

Schieffelin & Co., New York, has purchased the wholesale drug business of H. Halper, Inc., that city. The latter company will continue the manufacture and marketing of its own name pharmaceutical specialties.

Velo-Derma Corp. Formed

Velo-Derma Corp., Ltd., New York, has been organized to take over the rights to the preparation of that name. John H. Hershman, vice-president, Charles of the Ritz, New York, is president of the company and Marie K. Neary, secretary.

Volupte, Inc., Elects

Volupte, Inc., New York, has elected the following officers: president, Frederick Spitalny; treasurer, Simon Spitalny; secretary, Israel Schwartzbach.

McCormick & Co. Appoints

McCormick & Co., Baltimore, has announced that C. Leonard Fardwell has been appointed general sales manager, and Walter M. Davis, sales manager.

De Wans Depilatory

De Wans Co., Chicago, has been organized to manufacture a depilatory. J. L. Younghusband, former owner of Kissproof, Inc., Chicago, is owner and president of the company.

Paris Medicine Appoints in Canada

Paris Medicine Co., Saint Louis announces the appointment of W. H. Dunn Sales Co., Ltd., with offices in Toronto, Ontario, Canada and Montreal, Canada, their Canadian Sales Representatives. The W. H. Dunn Co., Ltd., travels 12 salesmen covering the entire dominion of Canada.

Removals

YBRY, INC.

Ybry, Inc., New York, has announced its removal to 513 W. 33 st., that city.

STERLING MANUFACTURING CO.

Sterling Manufacturing Co., Belleville, N. J., manufacturer of rouges and other cosmetics for the manufacturing trade, has announced its removal to its new plant in that city. The new plant is a one-story brick building ideally adapted for Sterling's manufacturing processes. In addition to the greatly enlarged quarters, the company has installed new equipment in order to take care of increased business as well as better to serve old customers. Fred Mitchell is president of the company and J. F. Higgins, sales manager.

Patch's Ephedrine Glycerole

E. L. Patch Co., Boston, has introduced a new cough syrup, "Patch's Ephedrine Glycerole," containing ephedrine hydrochloride, glycerin and Irish moss.

A. M. A. Accepts

Diphtheria Toxoid, manufactured by U. S. Standard Products Co., Woodworth, Wisconsin.

Regulatory

Campbell Changes Position

Walter G. Campbell, Director of Regulatory Work, U. S. Department of Agriculture resigned to become Chief of the Food and Drug Administration, effective February 1. Position of Director of Regulatory Work has been abolished, thus completing the reorganization of the department's law-enforcement work started in 1923. Secretary Wallace drafted Mr. Campbell, then acting chief of the Bureau of Chemistry, originally charged with enforcement of the Food and Drugs Act, to assist him in coordinating and improving the law-enforcement activities of the department. Under Mr. Campbell's direction, Secretary Hyde points out, the regulatory work has been grouped under responsible heads of major units and is now so organized that a Director of Regulatory Work is no longer necessary.

Mr. Campbell was one of the first inspectors appointed under the Food and Drugs Act passed in 1906. Dr. H. W. Wiley, first Chief of the Bureau of Chemistry and the father of the Pure Food Law, in 1907 selected Mr. Campbell to be his chief food and drug inspector, a position which Mr. Campbell held until 1914, when he was put in charge of the Eastern Inspection District of the Bureau of Chemistry. He was appointed assistant chief of the bureau in 1916 and acting chief in 1921. Having completed the task of creating special units for the enforcement of laws entrusted to the department by Congress, Mr. Campbell requested that he be relieved from his duties as Director of Regulatory Work.

Food and Drug Seizures

Food and Drug Administration caused seizure in January of 84 consignments of foods and drugs reports W. G. Campbell, Chief of the Administration. The administration also sent to the Solicitor of the department, with recommendations for prosecution, cases involving 40 stocks of foods and drugs. Notification was received from Federal courts of termination of 17 criminal prosecutions of violators, 16 of which terminated in fines ranging from $5 to $500, and one of which resulted in a suspended jail sentence.

Seizures for January included a consignment of ligatures, to be used in surgical operations, found to be unsterile; flour bleached with chemicals; misbranded veterinary preparations; adulterated ether; decomposed canned salmon, shrimp, and frozen eggs; celery and apples carrying residues of poisonous sprays; and other foods and drugs.

On January 10, the administration caused seizure of 969 dozen tubes of catgut ligatures shipped by a Boston concern to a Washington, D. C. hospital. The ligatures, designed for use in surgical practice,

HEYDEN
FINE CHEMICALS

SALICYLATES

Acid Salicylic — Sodium Salicylate

Acetyl Salicylic Acid

Methyl Salicylate — Minor Salicylates

CREOSOTE

CREOSOTE CARBONATE

GUAIACOL

Formaldehyde
Para Formaldehyde
Hexamethylenetetramine
Benzoate Soda
Benzoic Acid
Benzaldehyde

Benzyl Chloride
Bromides
Silver Salts
Calcium Guaiacol Sulphonate
Potassium Guaiacol Sulphonate
Glycerophosphates

HEYDEN CHEMICAL CORPORATION
50 UNION SQUARE NEW YORK

180 North Wacker Drive Chicago, Ill.

Factories:

Garfield, N. J. Perth Amboy, N. J.

were alleged to be sterile, but examination proved that a material part of the consignment was not.

January seizures also included eight consignments of an inhalant, shipped by a New York manufacturer. The Government alleged that the product did not comply with the law in that the label either did not carry a statement indicating the proportion of alcohol, or that the declaration was printed inconspicuously, and because the labeling, recommending the product as "an inhalant to relieve irritation and congestion of head colds * * *," was false and fradulent.

Helen Dawn Under Fire

A ten year Federal investigation of "prize puzzle" contests in magazines and newspapers culminated in indictments, February 1, against officers of the Helen Dawn Co., Chicago, cosmetics.

The concern was charged with duping thousands of puzzle workers by converting them into salesmen.

The Helen Dawn Co. since 1915 has obtained more than $25,000,000, the government said, and in 1931 collected $1,300,000 from a half million puzzle solvers. Those who started out to "solve the puzzle and win $3,700 or an automobile" were eventually required, the prosecutor explained, to buy cosmetics at wholesale and earn "votes" by selling the products.

Named defendants in the indictments for misuse of mails in a scheme to defraud were: Sibley F. Everitt, president of the company; William E. Duff, Crystal Lake Ill., vice-president; John E. Woodman, Waukegan, secretary and treasurer, and James M. Woodman, Waukegan, manager and director.

F. T. C. Authority Upheld

Authority of the Federal Trade Commission to issue public complaints and hold public hearings was upheld, January 30, by the Court of Appeals of the District of Columbia in approving the action of the lower Federal court in refusing an injunction to E. Griffiths Hughes, Inc., Rochester, N. Y.

The company sought an injunction against publicity because the commission's complaint charged that "Kruschen" salts are only a laxative and are not an obesity cure as advertised, and that "Radox" bath salts are not imported, do not contain the essence of European spas, and have no therapeutic effects. The company declared that publicity of the complaint and hearings following it would injure its reputation and its business.

Pointing out that the company did not charge that the commission acted arbitrarily or was disclosing trade secrets, the court said there is nothing in the law to make the commission a secret inquisitorial body. The fact that the law does not make public hearings mandatory was construed by the court as giving the commission authority to avoid disclosure of trade secrets if the necessity should arise.

Campbell Warns Again

W. G. Campbell, Chief of the Food & Drug Administration, has issued a warning to manufacturers of medicinal preparations advising them that extensive surveys have shown that there are still on the market many products bearing label claims which their compositions do not justify. This warning is a revision of a similar warning issued in June, 1931.

The unwarranted claims noted have included: Arthritis, Rheumatism, Gout, Sciatica, Joint Disorders, Appendicitis, Cholera Morbus, Cholera Infantum, Dysentery, Kidney and Bladder Disorders, Albuminuria, Dropsy, Cystitis, Nephritis, Pyelitis, Uremia, Bright's Disease, Prostate Disorders, High Blood Pressure, Angina Pectoris, Heart Disease, Bone Diseases, Blood Poison, Cancer, Carbuncles, Ulcers, Erysipelas, Scrofula, Varicose Veins, Eczema, Psoriasis, Chicken Pox, Lumps, Measles, Small Pox, Meningitis, Scarlet Fever, Typhoid Fever, Chorea, St. Vitus Dance, Convulsions, Epilepsy, Hysteria, Melancholia, Neuralgia, Nervous Disorders, Mental Disturbances, Tonsillitis, Quinsy, Sore Throat, Diphtheria, Bronchitis, Laryngitis, Catarrh, Asthma, Hay Fever, Female Remedies, Amenorrhea, Ovarian & Uterine Diseases, Menstrual Disorders, Vaginal Diseases, Leucorrhea, Venereal Diseases (Male or Female), Influenza, La Grippe, Pleurisy, Pneumonia Sinus Affections, Tuberculosis, Gall Stones, Liver Disorders, Stomach Ulcers, Gastritis, Gastro-Enteritis, Acidosis, Jaundice, Toxemia, Diabetes, Wasting Diseases, Goitre, Hernia, Anemia, Pernicious Anemia, Debility, Male and Female Rejuvenators, Pellagra, Mallaria, Pyorrhea, Trench Mouth, also parasitic, bacterial, and fungous infections.

Armand—F. T. C. Decision

Nearly eleven months after the final argument of the Armand Case the Federal Trade Commission has issued its decision, which is both for and against the Armand Co. Charles Wesley Dunn, counsel for the company, has issued this statement to the drug trade in explanation of the decision:

"The Commission has decided against the Armand Co. to the extent that it finds that the company illegally procured contracts, agreements, understandings, promises and assurances from drug dealers that they will resell Armand products at prices fixed by it and not resell such products to price cutters. This with the alleged effect of suppressing price competition in the resale of Armand products; of constraining dealers to resell at prices fixed by the company; of preventing them from reselling at less prices; and of depriving consumers of the price advantage of free competition in the resale of Armand products.

"And the Commission has issued an order commanding the Armand Co., and its officers, agents, representatives and employees, from entering into or procuring such contracts, etc., to fix the resale price of Armand products and to prevent their resale to price cutters. The Commission has issued this order in face of the fact that Trial Examiner Sheppard, who presided at the hearings and passed upon the evidence, completely exonerated the company from this charge of antitrust law violation. Also in face of the fact that the evidence clearly established that the company has done no more than to pursue a simple refusal-to-sell policy, which it has the legal right to do; that practically every dealer who testified at the hearings admitted that once he bought Armand products he was free to resell at any price and to whom he pleased. Therefore because the company is convinced it has not committed the offense found and that consequently this order is without legal justification it will immediately petition the United States Circuit Court of Appeals to set the order aside.

"In all other respects the decision is favorable. That is to say, the Commission—

(a) has dismissed the complaint as to the 15 wholesale druggist and 4 retail druggist and 1 department store respondents, who were charged to have participated in an illegal conspiracy with the Armand Co. These dealers are: Spurlock-Neal Co. Inc., Berry, DeMoville & Co. Inc., Robinson-Pettet Co. Inc., Lamar & Rankin Drug Co. Inc., Greiner-Kelly Drug Co. Inc., The J. W. Crowdus Drug Co. Inc., San Antonio Drug Co. Inc., Western Wholesale Drug Co. Inc., Fuller-Morrison Co. Inc., Humiston, Kelling & Co. Inc., Peter Van Schaack & Sons Inc., McPike Drug Co. Inc., Faxon-Gallagher Drug Co. Inc., J. S. Merrell Drug Co. Inc., A. M. Berry, A. D. Berry, F. S. Berry, W. D. Phillips and M. P. Williams, co-partners doing business under the trade name of Berry, DeMoville & Co., The Fair Inc., E. H. Cone Inc., T. C. Marshall, doing business under the name of Marshall's Pharmacy, Clarence E. Jeffars and Malcolm J. Long, co-partners doing business under the trade name of Jeffares-Long Drug Co., Owl Drug Co. Inc.

(b) has in effect dismissed the charge that the Armand Co. conspired and combined with its dealers to fix the resale price of its products, etc., and thus to monopolize and unduly restrain interstate trade.

(c) has in effect dismissed the charge that the Armand Co. illegally conspired and combined with its wholesalers to pre-

YOU COULD NAME CERTAIN SALESMEN—

THEY have gained your confidence because they deserve it. They know nearly everything about their own business, and are intelligent about yours.

Most buyers of alcohol place the Rossville salesmen whom they know in this category. It never is necessary, but if it were, they would willingly pay more for alcohol in order to be assured of his valued contacts.

As a matter of fact, buyers usually pay less when they buy their alcohol requirements from Rossville. This is because the Rossville salesman, insofar as he is able, sees to it that the customer gets the right alcohol for his purpose, at the right time, in the right way, and that he stores, handles and uses it to the best advantage.

One of our friends has suggested that the long familiar Rossville slogan "GET THE RIGHT SPIRIT" could be amplified with the statement "THE ROSSVILLE SALES MAN HAS THE RIGHT SPIRIT."

"Get the Right Spirit"

●

BRANCHES AND DISTRIBUTORS

Atlanta
Baltimore
Buffalo
Boston
Chicago
Cincinnati
Cleveland
Detroit
Grand Rapids
Kansas City, Mo.
Louisville
Newark
New York
Philadelphia
Pittsburgh
St. Louis
St. Paul
San Francisco

●

ROSSVILLE COMMERCIAL ALCOHOL CORPORATION

Lawrenceburg, Ind. New York, N.Y.

Rossville ALCOHOL
THE SPIRIT OF THE NATION

vent their reselling its products to general merchants and department stores or outside prescribed territories.

"I shall request the court to set aside this order not only upon the ground that the evidence does not support it but also upon the ground that there is no evidence that the Armand policy and conduct were unfair to its competitors. The *Raladam* case (283 U. S. 643) established that the last stated evidence is necessary to support an order under the Commission Act. And I shall raise several other novel legal questions. The result is that this case should finally take its place along side the *Miles*, *Colgate* and *Beech-Nut* cases, as one of the great and landmark cases of the resale price law. No drug trade manufacturer has been more active, insistant and successful in preventing unfair resale price cutting than the Armand Co. It has built its business upon the principle that dealers should have a fair profit in the resale of its products. Therefore if it can win this case, the fact will be established that such a policy can be successfully pursued in both a practical and legal sense.

"The odyssey of this case is interesting.

June 27, 1925, or nearly 8 years ago, the complaint issued;

February 18, 1929, nearly 4 years later, the hearings opened;

May 22, 1931, over 2 years later, the hearings closed, after being held throughout the country (from coast to coast, from Illinois in the north to Texas and Georgia in the south) and after 73 witnesses were called by the Commission;

March 15, 1932, nearly a year later, the final hearing was held; and

January 27, 1933, nearly a year later the Commission's order issued.

"This record indicates a long drawn out case; every effort by the Commission to win it; and considerable hesitancy as to the form of the final order. The fact is that it is the hardest fought resale price case on record. And if the court should rule that the Commission Act does not forbid resale price action by a manufacturer unless it is proven injurious to his competitors. the application of that statute to such action will be considerably curtailed.

"Both Carl Weeks and I welcome the opportunity to secure a final court decision upon the validity of this order. And until that decision is rendered there will be no change in the *Armand* merchandising policy. Even if that decision should be adverse to the company it can and will continue such policy free from the contracts, etc., condemned. The company is making this court fight not only to vindicate itself but also to undertake to establish a more favorable resale price law in the interest of its dealers and fair competition between them."

Vitamin Standard Samples

The Pharmacopoeial Vitamin Advisory Board has been organized, with the approval of the U. S. P. Board of Trustees, for the preparation and distribution of vitamin standards within the United States. This board consists of Dr. Lafayette B. Mendel, Yale University; Dr. H. C. Sherman, Columbia University; Dr. E. M. Nelson, Protein and Nutrition, Bureau of Chemistry and Soils, Department of Agriculture; E. F. Kelly, representing the U. S. P. Board of Trustees; E. Fullerton Cook, representing the U. S. P. Committee of Revision.

Plans have been developed by this board for distribution of samples in accordance with the following plan.

Scientific laboratories and research workers may obtain the International Standard Carotene, for Vitamin A, also the International Standard Irradiated Ergosterol,

E. Fullerton Cook

for Vitamin D, and the International Standard Activated Clay for Vitamin B, either through Dr. E. M. Nelson, Protein and Nutrition Division, Bureau of Chemistry and Soils, Department of Agriculture, Washington, D. C., or through the U. S. Pharmacopoeial Vitamin Advisory Board, 43rd Street and Woodland Avenue, Philadelphia.

International vitamin standards are issued to serve only in vitamin assays. Quantities distributed are suitable only for assays with small laboratory animals such as rats, pigeons and mice.

These International vitamin standards, sent to this country by the Permanent Standard Commission of the Health Organization of the League of Nations, are issued without cost but only for scientific research.

The "Reference Cod Liver Oils" of known vitamin A or vitamin D potency, expressed in International units, will be distributed only by the U. S. Pharmacopoeial Vitamin Advisory Board, 43rd Street and Woodland Avenue, Philadelphia, and are the only standards available for use of commercial laboratories of the United States for standardization of products containing vitamin A and vitamin D.

The U. S. P. Vitamin Board has also assisted in securing an authentic lot of U. S. P. Cod Liver Oil, through the Bureau of Fisheries at Washington, and this oil is being packaged in 30 cc. glass containers and will be kept constantly under refrigeration. This oil will now be assayed for its vitamin A and vitamin D potency in comparison with the International Units and its vitamin activity determined by the new U. S. P. assay methods, which will be strictly followed. When this is done these "Reference Oils" will be ready for distribution for the standardization of Cod Liver Oil and other vitamin-active products.

Those who have already offered to conduct assays on the "Reference Oil," are:

Dr. E. V. McCollum, Johns Hopkins University; Dr. H. Steenbock, Wisconsin Alumni Research Foundation Laboratory; Dr. Walter H. Eddy, Columbia University; Dr. Katherine H. Coward, Pharmacological Laboratory of British Pharmaceutical Society; Dr. E. Poulsson, of State Vitamin Institute, Oslo, Norway; Members of the A.D.M.A. Vitamin Committee: Abbott Laboratories (Dr. Carl Nielsen), Eli Lilly & Company (Dr. H. W. Rhodehamel), Parke, Davis & Company (Dr. A. D. Emmett), E. L. Patch Company (Dr. Arthur D. Holmes), E. R. Squibb & Sons (Dr. John F. Anderson), Frederick Stearns & Company (Dr. Robert L. Jones); also Health Products Corp., through Dr. Henry T. Mason; International Vitamin Corp., through Dr. J. K. Marcus; Maltine Co., through Dr. E. J. Quinn; Mead Johnson & Co., through Dr. Charles E. Bills; Winthrop Chemical Co., through Dr. Charles W. Hooper.

Uniform report blanks will be supplied by the U. S. P. Vitamin Board for use of laboratories cooperating in standardization of Reference Oils. All reports will be listed under a code number and all laboratories participating will be sent all reported results.

It is expected that until the Board has secured more data on vitamin deterioration in cod livef oil, the "Reference Oils" will be re-assayed each six months.

Brazil Revising Tariff

The President of Brazil has appointed a Commission to revise the tariff schedule and a part of the proposed new tariff rates on items have been published.

The chemical schedule which will include chemical products, drugs and pharmaceutical specialties is now under investigation by the Commission. The Commission will be glad to receive any suggestions pertaining to the tariff schedule from American firms. It is suggested that all American concerns who are at present making shipments to Brazil or who contemplate entering the market should forward suggestions to their representatives in Brazil.

Toilet Preparations Stand or Fall on the Quality of their **Basic Ingredients**

Neither secret formula nor manufacturing skill alone insure successful selling quality. The grade of basic materials you use, in the long run, makes or breaks your product. Over 40 years of highly successful experience with manufacturers and packers attests our ability to contribute the grade and variety of basic ingredient that will creditably take care of your product's quality.

Almond Meal	FACTOLAC	Talcum
Balsam Tolu	Gum Arabic	Irish Moss
Benzoin Gum	Gum Tragacanth	Lavender Flowers
Chalk (Precipitated)	Henna	Olibanum
Chinese Shavings	Henasoap Shampoo	Orris Root
Cuttle Fish Bone	Indian Gum (Karaya)	Powdered White Soap

QUINCE SEED OF THE HIGHEST OBTAINABLE QUALITY

HOPKIN'S NEUTRAL WHITE SOAP—Powdered, Granulated. Contains NO Soap Bark, Free Alkali, Free Acid, heavy metals. Totally free of rosin, sugar and foreign matter.

FREE at your request: The Hopkins "BASIC INGREDIENTS" booklet. Useful, informative, valuable.

J. L. HOPKINS & CO.

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Beeswax Bleacheries and Refineries in Morris County, New Jersey, and Elmsford, New York.

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Drug Exports Down Sharply

A little over ten million dollars worth of medicines (not counting those to Alaska. Hawaii and Puerto Rico) were shipped abroad last year by American manufacturers. Making up this total were $5,165,000 of proprietary medicines, $2,712,000 of druggists' non-proprietary preparations, $1,832,000 of biologicals, and medicinal oils valued at $318,000.

Compared with the trade in 1931, when sales were $15,104,000, the first and last of the above groups (proprietaries and oils) made up less of the total, while biologicals and non-proprietary lines gained in relative importance.

Although their value dropped considerably, the volume of oils sold held up well; in fact, more gallons of cod-liver oil were sold than in 1931, and white mineral oil sales were almost gallon for gallon equal to that year's total. Shrinkage in exports of two lines of proprietaries—salves for coughs and colds, and tonics—accounted for practically half of the decline in this group. One line, malaria, chill and fever remedies, went ahead of its 1931 business; and one, digestive preparations, of its 1930 record.

Exports of cosmetics and toilet soaps totaled $4,738,000. Trade with American non-contiguous territories is not included in these totals. Exchange, tariff and other restrictions closed down outward shipments of all the various cosmetics specialties, but those experiencing less of a slackening included hair preparations and dentifrices other than creams. Leading lines, however, remain dental creams, toilet or fancy soaps and talcum powders. None of the foregoing figures take into account the business done by American firms abroad through their branch factories which is reputed to have had an increasing bearing on exports, according to the Department of Commerce.

Coal Tar Medicinals Up

Production and sales of medicinals of coal-tar origin in 1931 increased about 11 per cent. over 1930; flavor and perfume materials show practically no change; photographic chemicals increased about 11 per cent. in production and 20 per cent. in sales volume and other finished products increased about 2 per cent. in production and 7 per cent. in sales volume; according to the United States Tariff Commission.

Production and Sales, 1931
(In thousands)

Item	*Sales Pounds*		*Production Pounds*
Medicinals	6,240	8,523	8,567
Flavors and perfume materials	3,037	4,109	3,034
Vanillin	308	1,410	307
Photographic chemicals	732	705	695

Figures for production and sales represent total domestic production inasmuch as they include estimated production for the small percentage of firms for which figures were not obtained by the commission. Actual figures obtained included more than 90 per cent. except for perfume materials (75 per cent.)

Cresol Duty Changed

A change in the cresol duty has been approved by the Bureau of Customs on recommendation of the appraiser at New York, who reported that an investigation in the trade disclosed that metacresol containing less than 90 per cent. U. S. P. cresol, metaparacresol, and other, similar products, are not bought and sold and known commercially as cresylic acid. Accordingly these products will be dutiable at 40 per cent. of the American selling price plus 7 cents per pound under paragraph 27 (a), instead of at the present rate of 20 per cent. plus 3½ cents per pound under paragraph 27 (b). The new rate will be effective thirty days after publication in Treasury Decisions.

Financial

Stocks Move Slightly

Prices of common stocks of corporations in the drugs and cosmetics industry moved within a narrow range during January and the first two weeks in February, according to the Standard Statistics Co., New York. A comparison of the drugs stock index and the index for 351 industrial stocks since the first of the year follows:

1933	*(1926 average equals 100) Drugs and Cosmetics*	*351 Industrials*
Jan. 4	66.4	46.4
11	66.8	47.3
18	64.6	45.0
25	66.5	45.9
Feb. 1	64.7	43.9
8	65.9	43.6
1933 High	66.8	47.3
Low	64.6	43.6
1932 High	88.3	61.6
Low	45.0	31.9

Earnings and Dividends

COMMERCIAL SOLVENTS CORP.

Commercial Solvents Corp. for 1932: Consolidated net profit after Federal taxes, inventory adjustments and other charges, $1,282,343, equivalent to 50 cents a share on 2,530,255 no-par capital shares, compared with $2,118,318, or 83 cents a share on 2,530,126 shares in 1931.

DOW CHEMICAL CO.

Dividends on stock of Dow Chemical Co. have been declared payable February 15, 1933, to stockholders of record February 1, 1933, as follows: Preferred stock 1¾%; Non-Par Value stock 50c per share.

DRUG, INC.,

Drug, Inc. has declared a quarterly dividend of 75 cents per share, thus placing the common stock on a $3 annual dividend basis as compared with the $4 rate which had been in effect since the company was formed. The new dividend is payable March 1 to stockholders of record Feb. 14. While the reduction in the dividend was dictated by a desire to follow a conservative financial policy, officials of the company stated that there would be no curtailment in its important expenditures for national advertising during 1933 and that in the case of some of its products appropriations would even be increased.

E. I. DUPONT

E. I. du Pont de Nemours & Co., Inc., reports net income for 1932 of $26,234,778, equivalent, after dividends on the debenture stock, to $1.82 a share on 10,867,678 common shares, against $53,190,059, or $4.29 a share on 11,008,512 shares in 1932.

The company's dollar volume of business in 1932 was about 27 per cent. less than in 1931. The reduction in tonnage accounted for 21 per cent. of this decline, while about 6 per cent. was caused by the cut in selling prices.

An analysis of the company's business contained in the report shows that there are six industrial departments and four wholly owned subsidiaries, each a self-contained unit manufacturing and distributing chemical products. The following table shows the order of importance of these units from the standpoint of the volume of business and of capital invested for 1932:

Departments or Subsidiary Companies	*Vol. of Business*	*Cap'l Inv.*
Organic chamicals dept. (dyestuffs, tetra-ethyl lead, ethyl alcohol and other organic chemicals)	1	1
Fabrics and finishes dept. (pyroxylin finishes, paints and varnish, pyroxylin and rubbercoated fabrics)	2	5
The Grasselli Chemical Co. (inorganic heavy chemicals, acids, zinc, etc.)	3	2
Du Pont Cellophane Co.	4	7
Du Pont Rayon Co.	5	3
Explosives dept. (commercial explosives and blasting accessories)	6	4
The R. & H. chemicals dept. (electro-chemicals and chemical specialties)	7	8
Du Pont Viscoloid Co. (pyroxylin and acetate plastics and articles fabricated therefrom)	8	9
Ammonia dept. (synthetic ammonia, ammonia products, methanol and higher alcohols)	9	6
Smokeless powder dept. (sporting and military explosives)	10	10

The company's current assets at the end of 1932 were $107,325,753, and current liabilities $10,630,857. This compares with current assets of $121,928,312 at the end of 1931, and current liabilities of $9,455,003. Current assets included $20,976,197 in cash and $41,726,202 in marketable securities, of which $37,267,000 was in United States Government obligations. Total assets were $595,486,070, against $620,540,020 at the end of 1931. The surplus was $178,717,373, against $198,933,044. The company had 28,000 employes at the end of 1932, against 29,000 a year ago. The report says the company has continued its efforts to provide employment for as many as possible through the spreading of work.

NOZEMA CHEMICAL CO.

Nozema Chemical Co. reports for 1932: Net income after Federal taxes and other charges, $197,218, equal to $5.02 a share on 39,315 common and Class B combined shares, compared with $165,053, or $4.20 a share, in 1931. Sales for the year totaled $975,498, against $957,923 the year before.

PACK-URGES*

by "Duff" Gordon

LYONIZED LIPS:

J. B. Lyon used to plan compelling advertising campaigns about perfumes and cosmetics. Now he has a brain child of his own to rave about . . . We refer to those trick packs of lipstick tissues, as neat as book matches and designed to save handkerchiefs and napkins the ruinous stains of indelible lipsticks. You see those tissues in smart handbags everywhere now-a-days . . . Apropos of the Lyon Lipstick Tissues, we have an idea which should interest lipstick manufacturers. If interested, write us. (*Those Silver and Black boxes which complete the LYON LIPSTICK TISSUE presentation were made by us . . . We specialize in packaging good ideas*).

• • •

CAP HUNTING AGAIN:

No gentle reader, this little lady is not praying . . . She is merely trying to recover the vanishing cap of the cream tube, and getting herself in a nasty temper at the same time . . . It's high time some cosmetic genius gave the little women of the United States a break by furnishing Captive Caps on cream tubes . . . or else adopt the new Valvo Capless tube featured by Pack-Urges last month. Whether you use National's Captive Cap or the Valvo Capless feature, you will find us ready to serve you. See National Collapsible Tube Company's announcement for particulars on standard size tubes and caps.

• • •

EAZ now in TUBES:

Eaz (pronounced Ease)—the quick relief for Athlete's Foot and allied ills, has switched from jars to tin tubes, making many new friends in the changing. In order to be completely effective, remedies of this type should be semifluid, so that every part of the afflicted area may be reached. Eaz is semi-liquid, so much so that tubes were not at first considered practical, but a tube was finally selected which met every requirement. Strikingly decorated in Yellow, Red and Black, these gay and practical containers outsell the larger jars formerly used. (*NATIONAL Tubes were used exclusively . . . We represent National exclusively in this territory . . . See us before you buy tubes*).

• • •

CARPETS IN COUNTER DISPLAY BOXES:

Depend upon Egmont (Calkins & Holden) Arens for an idea like this . . . Carpets in counter display boxes . . . The Carpet samples are cut in sizes 3 x 5 inches, stacked in a box with gold covering and hinged cover. Twenty-eight various colored samples protrude over the box shoulder, making selection a matter of moments. (*Mr. Arens knows his box designs . . . and equally important, he knows where to place manufacturing details for competent execution . . . Naturally we made those boxes.*)

"Pack-Urges" is issued occasionally in the interests of better packages. If you wish to receive it regularly it will be sent free upon request. Address: ***H. R. M. Gordon —A Complete Packaging Service—331 Madison Ave.*** *(Phone Murray Hill 2-1626) New York.*

*Copyright and trade-mark applied for.

Levissima

MAGNESIA OXIDE

U. S. P.

REGD. TRADE MARK.

for

MILK of MAGNESIA

• • • You recognize a superlative grade of Milk of Magnesia by its smooth texture, fine suspension, pleasant taste, excellent color and uniformity. All of these qualities may be easily obtained in your Milk of Magnesia through the use of "Pattinson's" LEVISSIMA, Oxide of Magnesia, U. S. P. Its extremely fine particle size, intense whiteness, physical and chemical purity, and chemical reactivity make it particularly suitable for the manufacture of the finest quality Milk of Magnesia. Send for samples and prices.

• • • *Also Magnesium Carbonate, U. S. P. and Technical, powder and blocks, and Magnesium Hydrate, Pharmaceutical.*

SCHOFIELD-DONALD CO., INC.

154 Nassau St. New York

UNIFORMITY IN

Oil of Orange

Exchange standards of production control assure the uniform performance of Exchange Brand (California) Cold Pressed Oil of Orange, U.S.P., the flavor that is stable in your finished products. Derived exclusively from rich oranges from Sunkist Groves, it has higher flavoring value, truer color and a superior aroma. Test it in your own products for better results at lower cost.

Exchange BRAND

California Cold Pressed Oil of Orange

U. S. P.

Sold to the American Market exclusively through:

DODGE & OLCOTT COMPANY
180 Varick Street,
New York City

FRITZSCHE BROTHERS, Inc.
78-84 Beekman Street,
New York City

Products Department
CALIFORNIA FRUIT GROWERS EXCHANGE
Ontario, California

Producing Plant
THE EXCHANGE ORANGE PRODUCTS COMPANY
Ontario, California

PARIS MEDICINE CO.

At a meeting of the directors of the Paris Medicine Co., held in Saint Louis, January 17, the regular quarterly dividend of 100% was declared, making a total of 400% for the year 1932. Sales for the last 6 months of 1932 were 35 1-3% ahead of 1931 for the same period with an increase in profits for 1932 over 1931 of 49.6%. Virtually the entire increase in profits was made during the last six months of the year or since the new management has been in office. Sales for the first twenty-two days of January were 107% ahead of last year.

PARKE, DAVIS

Parke, Davis & Co. reports for 1932: Net profit after depreciation, Federal taxes, foreign exchange losses and other charges, $5,927,923, equivalent to $1.21 a share on 4,874,991 no par capital shares against $6,292,565, or $1.29 a share on 4,873,517 shares, in 1931.

HELENA RUBENSTEIN

Helena Rubinstein, Inc. reports for 1932: Net profit after depreciation, Federal taxes and other charges, $120,903, equal to $1.09 a share on 110,579 no par $3 convertible preference shares, compared with $415,961, equivalent after $3 preference stock dividend requirements to 26 cents a share on 294,492 no par common shares, in 1931.

Chain Store Profits

The Federal Trade Commission delivered to the Senate, February 2, the twelfth of a series of reports on chain store operations.

The number of chains in the drug field covered by the Commission's survey ranged from two, operating an average of 13½ stores in 1909, to 166 operating 2,217½ stores in 1930. During the period of 1909 to 1930, the per cent. of gross profit in drug chains ranged from 31.9 to 37.5 and average sales from $100,632 to $154,542.

In the decade closed in 1930, however, the range was from 33.9 to 35.3 per cent. in gross profit and from $142,385 to $194,953 in average sales.

This decrease in the range, as between the long and short periods was in line with the general tendency in the chain store field where margins and sales tended to be more stable after 1921 than before. The scattering character of the figures for the earlier years, however, is probably largely responsible for the greater variation in the longer period.

For chain stores as a whole, the Commission found, the gross margin varied from 19.3 per cent. for grocery and meat establishments to 49.3 per cent. for confectionery chains. About one-fifth of the chains came within 40 to 50 per cent., two-fifths between 30 and 40 per cent. and two-fifths under 30 per cent.

Figures on gross profits from year to year in the drug chain field showed a remarkably level horizontal trend. The variation was from a low of 33 per cent. in 1915 to 3.75 per cent. four years later. Average sales of drug chains were also relatively stable, although a decline from $145,000 in 1912 to $100,000 in 1930 was evident.

Although sales in chain drug stores exhibited something of a tendency to move upward along with gross margins, the correlation was not high and the association was of an indefinite nature.

Drug and the $1-limit variety chains were the only two reported by the Commission to account for both higher margins of profit and higher sales in the larger chains than in the smaller groups. In general, a definite tendency was seen for average sales and profits of the chain stores as a whole to decline as the size of the chain increased. There was great variation, however, by kinds of chains and little or no evidence of any close relationship of size to profits and sales.

The fact that the larger chains have higher gross profits than the smaller is considered of some interest and significance as raising the question whether the larger chains are more serviceable to the consumer than the smaller chains.

Advertising

Radio Advertising Budgets

The drug and cosmetic industry spent $8,526,268 for radio time during 1932. The only group which exceeded this expenditure for radio advertising was foods and food beverages which spent $11,297,227.

The Pepsodent Co. was the biggest spender of this industry, using $1,735,380 worth of radio time. Others whose expenditures for radio time during 1932 totaled $250,000 or more include: Affiliated Products, Inc., $121,682; Barbasol Co., $570,405; Bayer Co., $318,541; Campana Corp., $268,377; Colgate-Palmolive-Peet Co., $468,660; J. C. Eno, Ltd., $293,672; Lambert Pharmacal Co., $322,281; Lamont Corliss & Co., $282,198; Charles H. Phillips Chemical Co., $351,726.

Account Changes

Ciba Co., Inc., New York, and Oakland Chemical Co., New York, "Dioxogen," to Lewis-Waetjen Agency, Inc., that city.

Denalan Co., San Francisco, dentifrice, to Emil Brisacher, that city.

Tyson & Co., Paris, Tenn., cosmetics, to Bott Advertising Agency, Little Rock, Ark.

Maynards, Inc., Chicago, cosmetics, to Carroll Dean Murphy, Inc., that city.

Wm. R. Warner & Co., Inc., New York, "Sloan's Liniment," to Cecil, Warwick & Cecil, Inc., that city.

Obituaries

William H. Bomka

William H. Bomka, president and general manager, The Arner Co., Buffalo, N. Y., died unexpectedly January 22, while visiting friends in Mt. Vernon, N. Y. He was fifty-six years old. He was educated at the University of Detroit, receiving his pharmacy degree there. He

was employed in that city by Nelson Baker for many years, later holding executive positions with manufacturing chemical companies in Montreal and Rochester. Fifteen years ago he became vice-president and general manager of The Arner Company holding the latter position until the time of his death. Shortly before his death he had experienced an attack of influenza but apparently had recovered, and went to New York City on business. He was calling on friends when he was stricken and died.

Roger B. Farquhar

Roger Black Farquhar, president, T. M. Duche & Sons, New York, importers, died at his home in that city, January 26, aged 61.

C. Milan Morse

C. Milan Morse, until his retirement in 1931 a chemist for the United Drug Co., Boston, died at his home in Watertown, Mass., January 30, aged 65.

Ira R. Mower

Ira R. Mower, for many years supervisor of sales of the Chicago branch of John Wyeth & Bro., Inc., Philadelphia, died February 1.

W. W. Solliday

W. W. Solliday, president, Kalak Water Co., New York, died January 23, aged 64. He was born in Easton, Pa., in 1869, attended Lehigh University and was graduated from the Philadelphia College of Pharmacy. He was formerly associated with John Wyeth & Bro. and from 1905 to 1915 was with E. R. Squibb & Sons. In the latter year he formed the Kalak Water Co. in association with William Schalck.

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Drug Markets

Review of conditions affecting markets and prices of chemicals, aromatics, essential oils, flavors, crude drugs and other raw materials, together with an alphabetical list of market prices.

Section also contains condensed review of patents and abstracts of particular interest to the chemist and those in charge of technical control.

Menthol Very Scarce

The Japanese menthol situation during the past month was featured by the extreme scarcity of spot stocks. The scarcity was so acute that considerable cooperation was necessary between the several importers to take care of requirements in this market. This condition would undoubtedly have warranted a sharp increase in prices here but due to the fact that from 300 to 400 cases of menthol were en route to New York, the scarcity was considered as merely temporary and no price advances were put into effect.

The arrival of the above mentioned material, some time in early March, will ease the firm price position here for only a short while, it is said, as at least 100 cases will go direct into consuming channels.

In Japan, the market continues as firm as recent reports indicated. The crude peppermint oil crop in Hokkaido is now definitely put at 500,000 kin, with the Sambi district producing 120,000 kin. This represents a reduction of from 40 per cent. to 50 per cent. With the war factor playing a large part in maintaining commodity prices at high level in Japan the cost to replace menthol will undoubtedly keep this commodity in a strong position for some time to come.

Prices during the past month ranged from $3.25 per pound in case lots to $3.40 per pound for lesser quantities.

Synthetic material was said to be in greater demand at prices ranging from $2.50 to $2.75 per pound. The increases in cost of natural material created greater interest in this item.

Camphor Holds Firm

Demand for camphor held at levels established during trading of the past several months. Prices are steady, reflecting the maintained cost of replacement. Japanese refined slabs are offered at from 37c to 38c per pound; refined powder at from 38c to 39c per pound and ½ oz. tablets at from 45c to 46c per pound.

The United States received less camphor from abroad in the first 11 months of 1932, the decline in the quantity of natural crude camphor imported compared with the corresponding period of 1931 amounting to about six per cent., natural refined 10 per cent., and synthetic 17 per cent.

Details of the trade follow:

Camphor	Imports first 11 months Pounds	Value
	1931	
Natural crude	1,908,903	$681,198
Natural refined	1,051,909	502,230
Synthetic	1,718,090	561,905
	1932	
	Pounds	Value
Natural crude	1,799,204	$512,973
Natural refined	941,459	331,977
Synthetic	1,416,331	393,743

According to the president of the Taiwan Camphor Manufacturing Company, the Japanese government camphor monopoly bureau in 1932 accepted from producers 4,500,000 kin of camphor (one kin equals 1.32 pounds). This is a considerable reduction as compared with total 1931 deliveries of 5,280,000 kin and 1930 deliveries of 5,500,000 kin. The reduced output is said to have resulted in abandonment of camphor stills to a certain extent.

Vice Consul Alan N. Steyne, Hamburg, reports that a Hamburg chemist has recently perfected a method for recovering camphor from waste celluloid which, it is claimed, retrives 40 to 45 per cent. of the original camphor content. Patents have been applied for in Germany and the other principal industrial countries. The expense of a plant with a daily output of 600 kilos is estimated to be $714. The cost of the reclaimed camphor is said to amount to $0.39 per kilo. The residue left after the extraction of the camphor is asserted to be useful as a fertilizer. It is claimed that between 30,000 and 40,000 kilos of celluloid waste is available monthly in Germany at an average price of $0.075 per kilo.

Alcohol Remains Quiet

The denatured alcohol market is quiet in keeping with the season. Most business now being done by anti-freeze dealers is from stocks previously purchased, distillers taking care of day to day requirements for the higher formulae. Demand from such quarters is characterized as moderate.

The price situation, however, continues firm at levels announced for the first quarter of 1933. Conditions therefore suggest that the second quarterly price schedules will be materially the same as for the January to March period.

The following prices prevail on the basic formula completely denatured alcohol No. 5 until March 31, quoted f. o. b. works:

C. D. A. 5 in drum carloads	$0.385
5 to 19	0.445
1 to 4 drums	0.465

Credit of 1c per gallon is given on this formula in carloads or more.

Credit of 1c per gallon is given on this formula in carloads or more.

Strychnine Remains Low

So far as open quotations are concerned no further changes were noted in the strychnine market. With business restricted, however, the keen competition among leading sellers that resulted in several recent reductions in this item, continues to be an unsettling influence.

Strychnine alkaloid U. S. P. crystals are now offered at 37c per ounce and the powdered material at 27c. Nitrate is 60c per ounce and powdered sulfate 24c.

Agar Still Competitive

Local competition in agar agar continues very keen and has resulted in further reductions in the price of this item. Number 1 is generally selling for from 47c to 50c per pound as to quantity with number 2 on the basis of from 42c to 45c per pound.

The primary market, however, is in rather sharp contradiction to developments here. The firmness in the replacement market is reported as due primarily to war preparations in Japan where a trade revival due to this cause is said to prevail.

Psyllium Seed Easy

The current spot market for French black psyllium seed continues easy in price with demand characterized as dull. During the past month a further recession was noted. Prices now range from 8c to 11c per pound as to quantity and quality. Blond seed continues unchanged at from 5c to 6½c per pound.

November psyllium imports into the United States amounted to 795,224 pounds worth $44,859, bringing the total for 11 months to the record figure of 4,847,824 pounds valued at $411,859, as compared with 4,171,500 pounds valued at $589,000 in the corresponding period of 1931. Of the 1932 receipts France contributed 2,105,124 pounds ($267,452) while British India supplied 2,264,896 pounds ($93,280).

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Iron & Ammonium Citrate, Green Pearls
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Citronella Fluctuates

The citronella market is featured by day to day fluctuations in the primary market. On recessions some gain in sales to this market were reported.

On the spot Java oil turned easier with drum lots selling at from 45c to 50c per pound. Tins were offered at from 47c to 53c per pound. Ceylon oil continues unchanged at previously quoted levels of from 34c to 35c per pound in drums.

During 1931 the Netherland East Indies expanded their exports of citronella oil by approximately 9 per cent. in volume over 1930, although the value of the total shipments declined by about 18 per cent. Aggregate shipments were: 1930, 815,053 kilos, $998,113; 1931, 885,760 kilos, $820,488; first six months, 1932, 170,416 kilos, $117,650. Leading countries of destination in their order of importance in 1931 were: United States, 335,769 kilos; France 193,085; Germany, 99,463; Great Britain, 92,478; Italy, 81,674; Japan 70,870; and the Netherlands, 69,491.

Geranium Firm

Although the geranium oil market has undergone a prolonged period of inactivity, the statistical position both here and abroad is such that the price situation is one of distinct firmness. The primary market for Bourbon oil has advanced some 20c per pound and it is said that only the lack of consumer interest at this time prevented prices on spot being marked up accordingly.

Bourbon oil on spot ranged from $4.20 to $4.75 per pound; African from $4.25 to $5.00 and Turkish from $1.65 to $1.85 per pound.

Consul General Oscar S. Heizer, Algiers reports that the Algerian Government has recently acquired apparatus for testing geranium oil, thereby providing a basis for official certification as to quality with a view of strengthening the position of Algerian oil in export trade.

Beeswax Holds Steady

Importers of beeswax indicated absence of important demand but a steady price position in line with the primary market for most grades. White in cases ranged from 30c to 34c per pound, and yellow refined at from 21c to 24c.

Exports of beeswax from Egypt during the first eight months of 1932 amounted to 95,141 kilos valued at approximately $50,000, of which 87,616 kilos worth $46,000 was shipped to the United States.

Total exports of beeswax from Cuba to the United States during 1932 amounted to 576,379 pounds worth $80,194 against 672,289 pounds valued at $118,294 in 1931. Shipments through Habana and Santiago de Cuba accounted for about two-thirds of the quantity exported in 1932.

Lime Oil Down Sharply

Distilled lime oil suffered a rather sharp decline during the past month, now generally being quoted at from $6.50 to $7.00 per pound. From a supply standpoint this item is said to be in a position favorable to sellers, but with a quiet demand prevailing competition has been particularly keen from certain dealers who have found it necessary to move stocks to secure ready cash.

Expressed oil is noted at from $10 to $12.50 per pound.

Vice Consul Obert Ronald Nelson, jr., Trinidad reports that the lime oil industry in British Guiana was active during 1931, exports, although smaller in volume, bringing a higher return to producers than in 1930. Shipment of oil amounted to 590 gallons valued at $39,806 in 1931, contrasted with 660 gallons worth $38,352 in 1930. United States import statistics show 1,249 pounds of lime oil valued at $10,603 imported from British Guiana in 1931 compared with 1,662 pounds worth $10,251 in 1930.

Lime tree acreage in British Guiana was increased during 1931 to provide a larger future supply of fruit for by-product manufacture. Over 808 acres of land were devoted exclusively to the cultivation of lime in 1931 compared with 703 acres reported in 1930.

Vanilla Beans Strong

Earlier reports of reduced crop of Mexican vanilla beans have not been upset in the least and the primary market continues quite firm. About 100,000 pounds of whole beans were obtained from the recent crop and the amount of cuts totaled approximately 30,000 pounds. Although this is considerably below a normal production, leading import factors are of the opinion that when the carryover is taken into consideration, together with the generally decreased consumer demand, there will be sufficient material available to take care of all requirements. The reduced production should not therefore, result in higher prices. In fact cuts during the past month showed a slightly easier tendency on spot, prices now ranging from $2.40 to $2.60 per pound.

Arnica Flowers Decline

Lower prices prevailed on arnica flowers during the past month with dealers offering freely at from 8c to 9c per pound. The lower prices failed to bring out any improvement in demand.

Digitalis Leaves Up Sharply

A sharp advance featured the market for digitalis leaves. Leading dealers are now quoting from 14c to 15c per pound with firm undertones prevailing at the higher levels.

Orange at New Low

Competition in orange oil has forced prices to the lowest level in the history of the industry. California cold pressed is now offered at a flat rate of 70c per pound in original containers. The move was made to meet competition wherever it was found.

Italian oil was generally quoted at from $1.00 to $1.25 per pound but it was reported that not all the oil offered as true Italian was so in fact.

Sweet West Indian oil ranges from $1.00 to $1.25.

According to the Agence Economique du Gouvernement General de l'Afrique Occidentale Francaise, the production of orange oil in French Guinea has been developing favorably since 1929, despite the considerable damage said to have been done the groves by the unscientific picking methods of the natives. Other drawbacks have been a lack of pruning, fertilizing, and irrigation. To improve the situation, efforts are being made to gather the orange crop at specific intervals when the fruit reaches maturity and to apply more scientific methods generally.

The 1931 orange oil output is reported to have been reduced somewhat by the intensive picking in prior years and damage by grasshoppers. The native producers were said to have received between 6.00 to 7.50 francs per liter according to demand. (Assistant Trade Commissioner George W. Berkalew, Paris.)

During the past two years about 50 per cent. of former Spanish orange oil producers discontinued producing, those still engaged in the industry having reduced their output by approximately one-half, according to reports in the trade. Production statistics are not available.

Orange oil imports into the United States from Spain have been on a continuous decline as evidenced in the following import figures: 1930, 17,264 pounds, $27,745; 1931, 4,930 pounds, $3,612; 1932 (first 11 months) 774 pounds, $509. (Commercial attache Charles A. Livengood, Madrid.)

Cod Liver Oil Dull

A slightly wider range of prices are being quoted on the popular brands of cod liver oil. From $17.50 to $21.00 per barrel are generally asked according to seller. The market is dull as most of the larger consumers are well covered on their requirements. The new fishing season is underway but as yet it is too early for any reports on the catch.

It is understood that exports of cod liver oil from Newfoundland from August 1 to December 24, 1932, amounted to 126,069 Imperial gallons contrasted with 118,933 gallons for the same period in 1931.

Carnauba Wax Firmer

Dealers in carnauba wax continued to report a stronger and higher replacement market. Although trading continued along routine lines spot prices are holding very steady in sympathy with the current strength of the market in Brazil. Number 1 wax on spot ranged from 22c to 23c per pound.

During 1932 the United States imported, chiefly from Brazil, 6,165,512 pounds of carnauba wax, valued at $733,292, as compared with 7,447,105 pounds, worth $1,070,281 during 1931.

Gum Benzoin Demand Less

Somewhat less call for Sumatra gum benzoin was noted in the spot market. Prices remained firm, however, as stocks are not over plentiful and the cost for shipment is slightly higher. Prices ranged from 18c to 20c per pound for this grade of gum. Siam was unchanged at from $1.10 to $1.25 per pound being asked.

More Geranium Imported

The essential oil import trade in 1932 was notable for the increased quantities of cassia and cinnamon, geranium and citronella and lemongrass oils received as compared with 1931, the relatively lower quantities of all other oils imported for which figures are available and the decline in values prevailing generally. Imports of essential oils into the United States during the past two years were as follows:

	1931 Pounds	1931 Value
Cassia and Cinnamon	305,549	$218,060
Geranium	139,702	416,210
Otto of rose (ounces)	19,977	209,102
Bergamot	80,611	136,432
Citronella and lemongrass	1,026,793	389,169
Lavender & spike lavender	279,588	499,637
Lemon	346,993	215,986
Orange	131,837	230,194
Sandalwood	10,250	49,261
All other	2,925,076	1,289,782
Total		$3,653,833

	1932 Pounds	1932 Value
Cassia and Cinnamon	326,402	$157,630
Geranium	144,138	463,081
Otto of rose (ounces)	15,463	104,909
Bergamot	39,790	72,814
Citronella and lemongrass	1,508,017	483,033
Lavender & spike lavender	211,968	228,463
Lemon	166,712	123,419
Orange	113,982	112,178
Sandalwood	4,723	18,911
All other	2,961,834	981,787
Total		$2,746,225

Asafoetida Points Higher

One important miller of asafoetida gum advanced the price of powdered material to the basis of 35c per pound. A careful study of the cost of milling this commodity was made and it was found that previous estimates had been entirely too low. The above price represents a basis on which business in this item can be transacted without taking an actual loss, according to this source. The price range in the market was from 32c to 35c per pound. Lump remained steady.

More Botanicals Imported

The total quantity of crude botanical drugs imported into the United States during the calendar year 1932 represented a gain over that of 1931, although the value was down. A notable expansion occurred in receipts of senna and pyrethrum flowers. Details of the trade are presented in the following table:

Imports of Crude Drugs into the United States

	1931 Pounds	1931 Value
Cinchona bark	1,581,109	$424,134
Senna	1,265,735	70,323
Pyrethrum flowers	4,521,143	522,103
Licorice root	59,283,254	1,424,247
Licorice extract	1,312,195	153,782
Opium, crude	129,818	393,623
All other	22,612,943	2,937,133
Total	90,706,197	$5,925,345

	1932 Pounds	1932 Value
Cinchona bark	1,138,677	$358,298
Senna	1,944,215	82,354
Pyrethrum flowers	12,110,736	1,309,092
Licorice root	57,568,593	1,156,307
Licorice extract	1,038,533	100,363
Opium, crude	129,970	273,816
All other	17,549,103	1,724,432
Total	91,479,827	$5,004,662

Less Guaiac Gum Imported

Stocks of gum guaiac on hand in Haiti toward the close of 1932 were reported at about 1,000 kilos only 563 kilos having been exported to the United States during the 12 months' period, October, 1931 to September, 1932, as compared with 2,414 kilos in the comparable preceding period, all of which was shipped from the port of Gonaines. Low prices are said to have resulted in losses to shippers and trade recession. (Vice Consul Bolard Moore, Port au Prince).

Ipecac Root Dull

A quiet spot market prevailed during the past month on ipecac root. Nicaraguan is generally offered at from 60c to 65c per pound.

It is reported that two former rubber plantations in British Malaya are now growing ipecac root instead of rubber. The plantings were begun with seedlings obtained from the local government experiment station. While the cultivation in this territory is difficult, about three years being required before the shrub is fully grown, it is said that the plantings are progressing favorably.

Saffron Easier

Orders for saffron involved, in most cases, single pound lots. Spanish was somewhat easier at from $10.50 to $10.75 per pound.

Kamala Lower

Spot quotations for kamala were reduced to the basis of from 16c to 18c per pound, carrying this item into new low ground. Weakness is still characteristic of the market and it is said that recent sales have done little to reduce the available supplies.

Gum Arabic Steady

The gum arabic market is fairly steady both here and in the Sudan. Cold weather in the primary market hindered the collection of the new crop now under way and resulted in a slight increase in the import costs but this was not sufficient to effect the spot market where prices continue unchanged at from 6c to 6½c per pound for amber sorts.

With the collection season running well into July there is ample reason to expect a satisfactory supply of gum even though low prevailing prices should reduce collection somewhat. Carryover is said to be above normal due to declining world consumption.

Tragacanth Tends Lower

The competition that features the market for gum tragacanth would indicate that deflation in the value of this item has not as yet run its full course. Although prices during the past month have not been reduced further, the market is weak and subject to shading, especially number 2 and 3 grades. Demand has been mainly from the textile field.

It has been estimated in the trade that the Turkish production of gum tragacanth in 1932 aggregated approximately 508,750 pounds, an amount more than double the 1931 output of 203,500 pounds.

Bergamot Goes Lower

Bergamot oil experienced a reaction to the situation of just a month ago when values were reduced to a basis of $1.25 per pound. It is generally anticipated now, that the surplus material in the primary market that had caused trouble all along the line will be disposed of outside the industry. At any rate the shipment market has advanced sharply and bids in practically all instances have been rejected.

Due to the advance abroad, local dealers are asking higher prices the range now being from $1.35 to $2.00 per pound as to quantity and quality offered. Some factors are inclined to discount the possibility of a continued advancing market, however, as demand is not of sufficient volume to carry this out and the local market is well supplied with material bought at low prices.

Cantharides Very Firm

With no stocks of Russian cantharides in the spot market and control of Chinese flies in one or two sources, the price situation is decidedly strong. Chinese material in cases sells for from $1.00 to $1.05 per pound and the powdered variety at from $1.15 to $1.25. Still higher prices are said to depend mainly on the extent of demand in the near future.

Patents

UNITED STATES PATENTS

Salicylic Ester Carbonates

Salicylic esters are completely converted into carbonate to give therapeutic products. Acetone is solvent. Concentrated solution of caustic alkali and phosgene are introduced simultaneously into acetone solution of salicylic acid ester and carbonate is formed. For example, one mole of normal propyl salicylate is dissolved in 50 parts acetone with cooling and continuous agitation. Then concentrated solution of potassium hydroxide containing 63 parts of KOH is slowly added and current of phosgene gas is passed through. Reaction mixture is diluted with equal volume of ice water until carbonate separates. Precipitate is filtered, washed with water and recrystallized from alcohol. It is normal propyl salicylic ester carbonate, melting point 61 to 62° C. Carbonate is also formed from ethyl salicylate. Carbonates of salicylic acid esters are odorless and tasteless and useful in administration of salicylates internally without usual unpleasant, harmful or irritating after-effects. Dow Chemical Co., Midland, Mich. U. S. P. No. 1,877,304, filed June 13, 1929.

Salt Substitute

Substances usually employed in place of salt for physiological reasons, are salty but have secondary unpleasant taste. When above products are treated with weak acids, (amino-acids) bad taste is removed. This is particularly true of glutamic acid or acid salts or mixtures, containing them, particularly mixtures with other amino-acids or acid salts of amino-acids obtained from albumens of vegetable or animal origin, albumenous products, etc. For example, 3 parts sodium formate and 1 part acid sodium glutamate are made into paste with small quantity of water and mixture evaporated to dryness in vacuum. A white, sometimes slightly colored, easily soluble product, having saline taste, is obtained and alkaline taste of sodium formate has disappeared. An example is also given of glutamic acid and sodium formate, glutamic acid and sodium lactate or sodium acetate. Products are obtained in powder form which can be easily sprinkled from can or salt-cellar. They can be safely used in place of ordinary salt in certain physiological conditions which do not permit its use. These products stimulate appetite. Chemische Pharmazeutische A.G. Bad Homburg, Hamburg, Germany. U. S. P. No. 1,875,055, filed May 17, 1929.

Bactericide

These new bactericides used for treating causes by acid-fast bacteria are aliphatic acids of general formula, R.R^{1}CHCOOZ, wherein R and R^1 are aliphatic hydrocarbon radicals, such as alkyl or alkylene and Z a hydrogen atom, alkali or alkaline earth metal or hydrocarbon radical. Products are used like chaulmoogra oil, chaulmoogra acid and homologues for combating leprosy and other diseases. Number of carbon atoms, molecular weight of compounds and position of carboxyl groups in chain are important factors in determining bactericidal and bacteriostatic (power of preventing bacteria) growth action of products. Compounds, which contain more than 9 and less than 22 carbon atoms, are most effective, particularly those from 15 to 18 carbon atoms. Presence or absence of ring structure is unimportant. Acid drugs are produced by introducing hydrocarbon radicals successively into an ester with an active methylene group, which when treated with alkali can yield a substituted acetic acid. Examples are malonic ester and acetoacetic ester. Product is ethyl-di-normal-heptyl acetate which is administered in admixture with equal parts of olive oil, preferably admixed with 2% anesthesine to reduce pain of injection. Abbott Laboratories, North Chicago. U. S. P. No. 1,873,732, filed December 28, 1928.

Antirachitic Preparations

New, highly antirachitic are prepared from ergosterol subjected to ultra-violet rays. Solution of ergosterol in alcohol, benzine, gasoline, oils or similar solvents, is subjected to action of ultra-violet ray. Irradiation can be accomplished by dipping cooled ultra-violet lamp into solution. Oxygen must be excluded from process. Extracts containing ergosterol, for example yeast fat, can be irradiated in place of pure ergosterol. Irradiated alcoholic solution of ergosterol is evaporated under vacuum to 1.5 liters (starting from 50 liters); it is cooled and about 10% unchanged ergosterol precipitates out. This is filtered out and solution is evaporated to dryness to give antirachitic drug. Adolf Windaus, Gottingen, Germany. U. S. P. No. 1,873,942, filed November 28, 1927.

Vanishing Cream

Alkyl esters of higher fatty acid are used in manufacture of vanishing creams and other cosmetics. These are especially butyl esters used in place of glycerin. Then cream is no longer hygroscopic and does not absorb moisture from dry skins. Creams are thus softer and have better feel. Esters best for this purpose are ethyl, propyl or butyl esters of lauric, palmitic and stearic acid; also of hypogaeic acid and linoleic acid. Butyl stearate and other alkyl stearates are preferred, as well as butyl esters of mixtures of fatty acids occurring in vegetable oil, such as palm oil, coconut oil, corn oil, peanut oil, cottonseed oil. Preparation is made by melting 13 kgs. of stearic acid at 75 to 80° C. and one kg. of 50% potassium hydroxide solution is added with constant agitation, while stearic acid is kept liquid. Then 1.5 kgs. of butyl stearate are added. Homogeneous mass is obtained by vigorous agitation and mixed with 60 liters of water, which should be preheated to 75°C. Mixture is held at 75° C., while water is added. Then emulsion is allowed to cool, but beaten constantly until cold. Perfume is added as desired. In place of potassium hydroxide there may be used potassium carbonate, sodium hydroxide, or sodium hydroxide and borax, but potassium hydroxide is preferred. Suitable perfumes include rose oil, ylang-ylang oil, terpineol, musk, heliotropin, etc. Commercial Solvents Corp., Terra Haute, Ind. U. S. P. No. 1,875,530, filed December 4, 1929.

Amino-Alcohol Drugs

Therapeutic products of the 1-phenyl-2-alkylaminoalcohol-1 series are manufactured by hydroxylating these amino-alcohols in phenyl nucleus. Such compounds are obtained by treating compound of ortho-, meta-, or para-monobenzyl and 3:4-dibenzyl-oxypropiophenone type with halogenating agent, and then reacting compound with methylbenzylamine. This is hydrogenated with catalyst. Halogenation is carried out in diluent, for example methylene chloride, and of an acid-binding compound, such as potassium carbonate or calcium carbonate. Palladium is catalyst used in hydrogenation process. Max Bocknuehl Gustav Ehrhart and Leonhard Stein, Frankfurt-am-Main, Germany. U. S. P. No. 1,877,756, filed December 29, 1930.

Arsenicals

Arsenic acid substituted products of phenyl-azo-alpha-alpha-diaminopyridine are useful medicaments. They are preferably obtained by first hydrochloride salt by diazotizing para-aminophenyl-arsonic acid (para-arsanilic acid) in presence of hydrochloric acid. Diazotized solution is then coupled with alpha-alpha-diaminopyridine in presence of hydrochloric acid. Product is bright red, microscopic crystalline powder, melting with decomposition at 262° C. and slightly soluble in hot or cold water with reddish-orange color, and in methanol. Pyridium Corp., Nepera Park, N. Y. U. S. P. No. 1,874,655, filed May 7, 1929.

Drugs for Germ Infections

New acylated amino aromatic derivatives, such as acetylated beta-phenyl-azo-alpha-alpha-diaminopyridine, have medical action and can be used in treating germ infections. They are dissolved in acid fluid of stomach or in alkaline fluid of intestines. Their general formula is R.N:N.R$_1$, in which R is monocyclic radical of aromatic series and R$_1$ diamino pyridyl nucleus in which at least one amino group is combined with acyl group. Property of drugs

of being slowly saponified in presence of small quantity of hydrochloric acid or other acids make them very valuable drugs, since they will not be eliminated so quickly from stomach but will be retained there from some length of time. Pyridium Corp., Nepera Park, N. Y. U. S. P. No. 1,874,656, filed July 11, 1929.

Lithium Drugs

New drugs are lithium salts of 7-iodo-8-hydroxquinolin-5-sulfonic acid and like which contain at least 1 gram atom of lithium. They are yellowish brown powders of crystalline form, soluble in water of room temperature to extent of approximately 15%. Latter is important properties of these drugs, for sodium salts of same sulfonic acids are soluble only to 3%. Sulfonic acids are converted into lithium salts by suspension in water and addition of suitable lithium salt, which may be lithium carbonate, lithium oxide or lithium sulfate. Solution is then evaporated to dryness and lithium drug obtained. Winthrop Chemical Co., New York. U. S. P. No. 1,874,638, filed June 27, 1931.

New Bactericides

Alkylated, amino-accidium compounds are powerful bactericides. Thus for example one of these new bactericides is manufactured by mixing 3:6-diaminoacridine with an alkylating agent, such as methyl ester of toluene-sulfonic acid. Mixture is heated to 90 to 120° C. Common salt may be added to mass to aid in separating drug. These have tinctorial properties as well as physiological action. Winthrop Chemical Co., New York. U. S. P. No. 1,877,985, filed February 8, 1930.

Medicament for Anaemia

Products for specific prevention or beneficial treatment of anaemia contain as active ingredients salts of iron and copper administered as such or in admixture with other substances by direct feeding to patient. Both copper and iron must be present. Salts of copper and of iron may also be directly added to diet. They are in such form that they become available in blood stream for increasing haemoglobin content of blood and number of red blood corpuscles. Simple salts of iron, such as iron chloride, and inorganic salts of copper, such as copper sulfate, are used. Other salts suggested include copper acetate, copper chloride or even metallic copper. Copper must be present, because it is presence of copper that makes iron effective in haemoglobin building. Wisconsin Alumni Research Foundation, Madison, Wis. U. S. P. No. 1,877,237, filed June 18, 1928.

GERMAN PATENTS

Cosmetic and Pharmaceutical Powders

Dry, stable, cosmetic and pharmaceutical preparations in powder form are obtained by use of mixtures of alkali or alkaline earth sulfocyanides and essential oils. Sufficient quantity of terpin is added to mixtures to prevent their becoming moist or to deliquesce, and also to fix essential oil ingredients. On other hand terpin hydrate can also be used for production of aforementioned preparations, when in admixture with other ingredients of compositions it is dehydrated by heating. Such preparations after dehydrating treatment are just as stable as those whose manufacture is mentioned first. Catherina Weidner, Berlin-Charlottenburg, Germany. G. P. No. 559,278, filed January 30, 1931.

Vanillin

Vanillin is made by treating aged vegetable fibers or lignins prepared artificially or obtained naturally or liquors which contain these products in solution. with oxidizing agents at temperatures below 90° C., preferably between 10 and 50° C. Quantity of oxidizing agent used in about equivalent to quantity of vanillin that can be obtained. Ozone, chromic acid and like may be used as oxidizing agents. Dr. Hermann Pauly and Kurt Feuerstein, Wuerzburg, Germany. G. P. No. 552,887, filed September 28, 1928.

Drug from Hypophysis

Process for separation of active substance contained in posterior lobe of hypophysis involves treating solutions, whichcontain this substance by fractionation with adsorbents. Result is that only active substance, which increases blood pressure, is removed and adsorbed, while substance that acts on uterus remains in solution in by far its larger proportion. Silicic acid and certain definite silicates, like bentonite, are best suited for making this separation. Inasmuch as substance that activates uterus is also adsorbed when an excess of adsorbent is employed, required quantity of adsorbent that must be used in process is determined in preliminary experiment. Substance, that increases blood pressure, can be redissolved from adsorbate by means of suitable solvents. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. G. P. No. 550,935, filed September 8, 1929.

Aminoalkyl Drugs

Amino-alkyl halogenides with tertiary amino groups, which contain one or more aryl-methyl group in amino groups, are made to react with alkylizable compounds. Aryl-methyl groups are split out of arylmethylaminoalkyl compounds, that are formed in this manner, either singly or all together at one time by means of catalytically activated hydrogen. It is possible to alkylate amino-alkyl compounds, which contain at least one arylmethyl group in amino group and to split resulting alkylation products with catalytically activated hydrogen. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. G. P. No. 550,762, filed August 22, 1930.

Medicaments for Injection

Medicaments for injection purposes are heavy metal compounds, which are soluble in lipoids. Thus oxides or salts of bismuth or gold are caused to react with aliphatic or aromatic esters of mercaptocarboxylic acids. These compounds are easily soluble in organic solvents, such as olive oil, sesame oil and like, which are particularly suitable for preparation of solutions for injection. Schering-Kahlbaum A.G., Berlin, Germany. G. P. No. 550,765, filed December 17, 1926.

Toxin Nutrient

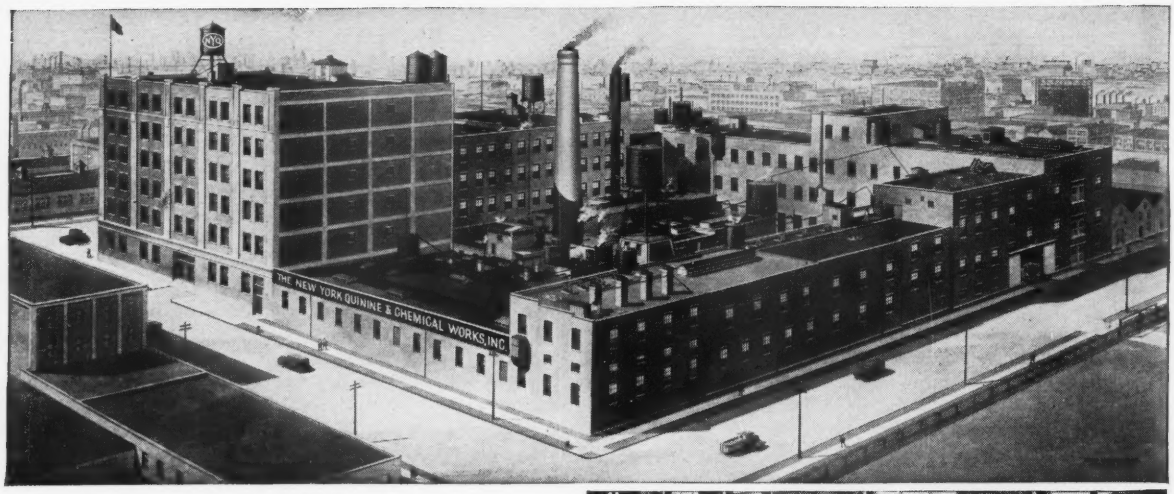
A medium, suitable for growth of gonococcus toxin, is described. Human placenta are digested and proportions of placenta and water extracting medium are chosen in such manner, that approximately one part of aqueous extract is obtained from 1.5 parts of placenta. It is also possible to digest placenta with any desirable excess of water, advisably in an apparatus provided with reflux condenser. Solution is concentrated to desirable strength under vacuum. Schering-Kahlbaum A.G., Berlin, Germany. G. P. No. 545,287, filed May 27, 1931.

Skin-Penetrating Compositions

Process is concerned with conversion of bacterial preparations, bacterial extracts, toxins, serums and like into products, which are stable and which easily penetrate skin and mucuous membrane. This is accomplished by mixing bacterial preparations, for example, in dried state with sufficient quantities of sodium benzoate. Mixture is processed into such form as can readily be used. A. von Wassermann, Dr. R. Siegfried von Wassermann, et al. Vienna, Austria. G. P. No. 550,833, filed November 9, 1924.

Papaverin-Like Drugs

These are derivatives of 1-benzyl-3-methylisoquinoline. Amides, which are prepared on one hand from phenyl-acetic acids and other derivatives of phenyl acetic acids, and on other hand from 1(3:4-methylenedioxy)-phenyl-2-amino propane or 1-(3:4-dimethoxy)-phenyl-2-aminopropane, are treated with acid condensing agents. Bases thus optained are heated to about 180° C. with palladium black to obtain dehydrogenated product. Compounds of chemical structure, like papaverine, are obtained. They act to control convulsions, and are superior to papaverine in this respect, while their poisonous qualities are less than those of natural alkaloids. E. Merck Chemische Fabrik, Darmstadt, Germany. G. P. No. 550,122, filed August 25, 1929.



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Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

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The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Hyoscyamine Alk.

Chemicals

Acetanilid, USP, 200 lb bbls..lb	.26	.27
Acetone, pure 350 lb drs wks..	.11	.12
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30
ACID, Acetylsalicylic, 225 lb bbls.	.70	.75
Agaric, 1 oz vials.....oz	...	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18
Benzoic, USP, 100 lb bbls.lb.	.48	.52
Boric, 300 lb bbls.....lb.	.07	.08
Cacodylic, 5 lb. bot.....lb.	...	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18
Cinnamic, 5 lb cans.....lb.	2.85	3.25
Citric, USP, crys 230 lb bbl lb	...	.29
USP, crys imp. 112 lb keg lb.	.34	.36
USP, powd 200 lb bbl...lb.	...	.31½
Gallic, USP, 150 lb bbls..lb.	...	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.59
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55
Hypophosphorous, USP, 30% .....lb.		
5 gal demis.....lb.	...	.85
Lactic, USP, VIII 100 lb cbys lb.....	.45	.47
USP, X 100 lb cbys.....lb.	.47	.49
Phenylcinchonic.....lb.	...	3.25
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70
Salicylic, USP, 100 lb bbls.lb.	.40	.45
Stearic, double pressed, bags .....lb.	.08	.08½
Triple pressed, bags,....lb.	.10¾	.11¼
Succinic, 100 lb bbls.....lb.	...	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06
Tannic, USP, fluffy 50 lb bbls. .....lb.	.90	.93
Powd 200 lb bbls.....lb.	.80	.85
Tartaric, USP, 300 lb bbls.lb	.20	.20½
Aconitine, Alk, crys 1 oz vials .....oz.	...	30.00
Amorphous, 1 oz vials....oz.	...	20.00
Agaricin, 1 oz vis incl.....oz.	...	2.32
ALCOHOL, Benzyl, 5 lb bot lb. F. O. B. Works.....	1.20	1.35
Ethyl, USP, 190 pf 50 gal bbls.....gal.	...	2.535
Grain U. S. P. bbls....gal.	...	2.585
Pure tax free drums...gal.		
Ethyl.....	...	.445
Grain.....	...	.495
Denatured, (drums included) add 5c for bbls.		
No. 1 spec.....gal.	.335	.415
No. 5 comp.....gal.	.385	.465
23 a, spec.....gal.	.37	.49
39 b, spec.....gal.	.395	.515
40 m, spec .....gal.	.34	.46
Isopropyl refd 98-99% drs. incl.....gal.	.55	.60
Phenylethyl, 1 lb bot.....lb.	4.30	4.50
Aloin, USP, 100 lb cases....lb.	.80	.85
Aluminum Acetotartrate kegs .....lb.	...	1.60
Amidipyrine, 10 lb boxes....lb.	4.00	4.10
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40
Benzoate, USP, 1 lb bot...lb.	...	1.27
Borate, 10 lb bot.....lb.	...	.35
Bromide, USP, 450 lb bbls.lb.	.35	.36
Carb, USP, lump 150 lb kegs .....lb.	...	.11
USP, powd 150 lb kegs..lb.	...	.12
Citrate, 100 lb kegs.....lb.	.90	1.30
Ichthyolate, as to brand..lb.	4.00	4.50
Iodide, USP, 25 lb jars...lb.	...	3.72
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20
Valerate, USP, 25 lb jars...lb.	2.75	2.90
Amylene Hydrate, 1 lb bot..lb.	...	7.10
Antipyrine, USP, 100 lb cans.lb.	2.00	2.50
Apomorphine Hydrochloride, ¼ oz. vials.....oz.	22.45	22.70
Arecoline Hydrobrom, 1 oz vials .....oz.	5.25	5.35
Aspidospermine Amorphous.oz.	...	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	6.50	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00
Sulfate, 5 oz cans.....oz.	...	2.50
Single ounce.....oz.	...	3.00
Barbital, 1 lb. bot.....lb.	3.50	3.85
Barium Iodide, 5 lb box.....lb.	...	4.35
Sulfate, X-ray diagn bbls..lb.	.09½	.10
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80
Domestic syn. 50 gal bbl..gal.	.70	.75
St. Thomas, 50 gal bbls...gal.	.80	.90
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35
Formate, 1 lb bot.....lb.	3.25	3.50
Succinate, 160 lb cby.....lb.	...	5.25
BISMUTH, metal 100 lb cases .....lb.	...	.90
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.10
Betanaphtholate, 5 lb box.lb.	...	2.90
Citrate, USP, 5 lb cans....lb.	...	2.45
Chloride..... ....lb.	...	2.35
Hydroxide .....lb.	...	2.65
Nitrate, 25 lb jars.....lb	...	.95
Oxide anhydrous.....lb.	...	3.05
Oxychloride, 25 lb boxes...lb.	...	2.60
Salicylate, 25 lb boxes...lb.	...	1.55
Subcarbonate, USP, 25 lb boxes.....lb.	1.25	1.30
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.20	2.27
Subgallate, USP, 25 lb boxes .....lb.	1.35	1.40
Subiodide, 5 lb lots.....lb.		3.40
Subnitrate, USP, 25 lb jar.lb.	1.10	1.15
Subsalicylate, USP, 25 lb boxes.....lb.	2.15	2.20
Tannate.....lb.	...	2.15
Borax, crys USP, 400 lb bbls.lb.	...	.06
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90
Butylchloral Hydrate bot....lb.	4.00	5.00
Cadmium iodide, 10 lb bot...lb.	...	3.65
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	1.95	2.00
Citrated, 50 lb cans.....lb	1.55	1.60
Hydrobromide, 1 lb bot...lb.	4.80	5.00
Hydrochloride, 1 lb bot...lb	6.05	6.55
Sulfate, 1 lb bot.....lb.	5.40	5.90
Sodium Benzoate, tins....lb.	...	3.05
Salicylate, tins.....lb.	...	2.95
Calcium Bromide, 100 lb cs..lb.	...	.60
Carb, USP, 175 lb bbls....lb.	.05	.06
Gluconate, Gran. 125 lb..... bbls.....lb.	.47	.52
Powd.....lb.	.47	.52
Glycerophos, 250 lb bbls...lb.	...	1.05
Hypophos, USP, 25 lb cans lb.	.55	.60
Iodide, 5 lb bot.....lb.	...	3.75
Lactate, USP, 500 lb bbls lb.	.35	.40
Lactophosphate Soluble...lb.	...	1.20
Powdered tins.....lb	...	1.00
Insol, powd tins.....lb.	...	.50
Phosphate & Sulfate Tooth Paste grade, Works..lbs.	.03	.06
Sulfide, USP, 100 lb drs...lb.	.21½	.24
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.37	.38
Refined powd.....lb.	.38	.39
½ oz tab, 100 lb cases....lb.	.45	.46
Liniment, bbls.....gal.	2.10	2.20
Monobrom, 100 lb cases...lb.	1.60	1.65
Casein edible, 100 lb kegs...lb.	.45	.55
Charcoal Animal medicinal jars incl.....lb.	...	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07
Chloral Hydrate, USP, 25 lb jars.....lb.	.75	.77
100 lb drums.....lb.	.70	.75
Cholesterin.....lb.	11.00	17.00
Chloroform, USP, 50 lb drs...lb.	.25	.27
Chlorophyll, 1 lb. bot.....lb.	3.75	4.00
Chromium Sulfate Scales, tins .....lb.	.45	.50
Powdered tins.....lb.	.50	.55
Chrysarobin, 50 lb tins.....lb.	2.50	2.55
Cinchonine Alk, 100 oz tins..oz.	...	.34
Crystal.....oz.	.43	.46
Sulfate, 100 oz tins.....oz.	...	.23
Cinchonidin Sulfate, 100 oz tins .....oz.	.32	.35
Cincophen, U.S.P. kegs....lb.	...	2.75
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07
Hydrochloride, USP,.....oz.	...	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	10.52
Hydrobromide.....oz.	...	8.92
Hydrochloride.....oz.	...	9.52
Nitrate, oz vl 10 oz lots....oz.	...	9.80
Phosp. oz vl, 10 oz lots....oz.	...	7.92
Salicylate.....oz.	...	8.25
Sulfate, oz vl, 10 oz lots...oz.	...	8.42
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00
Salicylate, 1 oz vls.....oz.	...	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.14½	.15½
Imp. powd. 224 lb bbls....lb.	.17¾	.17¾
Creosote, USP, 42 lb cbys....lb.	.45	.47
Carbonate, 150 lb.....lb.	1.50	1.60
Cresol, USP, 400 lb drums...lb.	...	.18
500 lb drums.....lb.	.12	.15
DIGITALIN Pure, 1 oz vial..oz	15.00	15.50
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00
Emetine Alk, 15 gr vial.....oz.	...	.85
Hydrochloride, USP, 1 oz vl .....oz.	11.00	11.25
15 grain vials.....oz.	2.50	2.70
Ephedrine, alk. 25 oz. tins,..oz.	1.50	1.90
Hydrochloride, 25 oz. tins, oz.	1.30	1.65
Sulfate, 25 oz. tins.....oz.	1.30	1.65
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50
Imp. 100 lb bbls.....100 lb.	2.30	2.35
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00
Eserine Alk, 1 oz vials.....oz	...	50.00
Salicylate, 1 oz vials.....oz.	...	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00
ETHER, USP, 55 lb drums..lb.	...	.11
Anaesthesia, 55 lb drums..lb.	.21	.23
Nitrous, 1 lb bot.....lb.	.75	.77
Ethyl Chloride, 200 lb bot...lb.	.22	.24
Ethyl Iodide, 5 lb bot.....lb.	6.00	6.05
Formaldehyde, USP, 100 lb cbys lc-1 wks.....lb.	.07	.07½
Gall Extract.....lb.	.20	.21
GLANDULAR SUBSTANCES Duodenal Substance, 1 lb. lots.....	3.75	3.75
Liver Extract 1-20, 1 lb lots..	5.75	5.75
Orchic Substance (Testicular) 1 lb. lots.....	3.75	3.75
Ovarian Substance, whole, 1 lb. lots.....	12.50	12.50
Ovarian Residue, 1 lb. lots...	10.00	10.00
Pituitary Substance, whole, 1 lb. lots.....	45.00	45.00
Pituitary Substance, Anterior Lobe, 1 lb. lots.....	40.00	40.00
Thyroid, U. S. P., 1 lb. lots..	3.75	3.75
Oxgall Powder, 1 lb. lots....	1.25	1.25
GLYCERIN, CP, 550 lb drums .....lb.	...	.10¾
Gold Chloride, bottles.....oz.	12.00	12.50
Guaiacol, liq. USP. 100 lb. cbys.....lb	1.60	1.70
Crystals.....lb	2.25	2.50
Benzoate, 1 lb bottles.....lb.	...	3.00
Carbonate, 5 lb boxes.....lb.	1.75	1.80
Halazone, 5 lb bot.....lb.	2.75	3.25
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47
Homatropine Hydrobrom USP. .....oz.	...	14.50
5 oz and 1 oz vials.....oz.	...	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00
Sulfate, 1 oz vial.....oz.	22.50	23.00
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.		
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	...	40.00
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	.03½	.04½
5 oz, 1 oz vials.....oz.	13.07	13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07
Amorphous, 1 oz vial...oz.	...	75.07
Hydrobromide, USP. 1 oz vial .....oz.	...	25.00

Sulfate, 1 oz vial....oz.	...	25.07
Hypoquinone, 100 lb kegs...lb.	...	1.10
ICHTHYOL, tins....lb.	4.00	4.25
Iodide Arsenous, 5 lb bot...lb.	...	5.20
Arsenous-Mercuric soln, 5 lb bot....lb	...	.26
Iodine, crude, 200 lb kegs...lb.	...	1.95
Resublimed, 25 lb jars....lb.	...	2.65
Tincture bbls....gal.	...	2.55
Iodoform, powd 10 lb bot...lb.	...	5.20
Iron & Ammonium Citrate, USP, 50 lb cans....lb.	.42	.44
Chloride, USP, lump 400 lb bbls....lb.	.06	.08
Citrate, USP, VIII 25 lb can ....lb.	.94	.99
Hypophosphite, 5 lb cans..lb.	1.40	1.50
Iodide, 1 lb bottles....lb.	...	3.00
Phosphate, USP, 50 lb cans ....lb.	...	.69
& Potas Oxalate, 250 lb bbl ....lb.	...	.45
Pyrophosphate, USP, 50 lb ....lb.	.74	.80
& Sod Oxalate, 50 lb. cans.lb.	...	.30½
Sulfate, USP, crys bbls....lb.	.04	.04½
Ferrous dried bbls....lb.	...	.08
Valerate, tins....lb.	2.75	3.00
Jalap Resin, USP lumps, 5 lb tins....lb.	...	4.00
Powdered, tins....lb.	...	4.65
Lanolin, hyd 350 lb. bbls....lb.	.13	.15
Anhydrous, 350 lb. bbls...lb.	.14	.16
Lead Acetate, USP, 100 lb kegs ....lb.	.16½	.19½
Iodide, USP, VIII 5 lb bot.lb.	...	2.55
Lecithin, 5 oz. jars....oz.	1.00	1.30
Vegetable, cans....lb.	1.00	2.50
Licorice Ext Mass, cases....lb.	.19	.20
Compound powder, bbls...lb.	.11	.13
LITHIUM CARBONATE, 250 lb bbls....lb.	1.25	1.35
Citrate, USP, 100 lb kegs..lb.	...	1.40
Iodide, 5 lb bottles....lb.	...	4.60
Lobeline Sulfate, ¼ oz vial...oz.	...	8.75
Magnesium Carbonate, USP, 100 lb bbls....lb.	.08	.09
English, oz blocks....oz.	.16	.18
Glycerophosphate, 5 lb tins.lb.	3.20	3.25
Hypophosphite, 5 lb cans..lb.	1.10	1.15
Oxide, 100 lb. cases....lb	.35	.45
Salicylate, 100 lb kegs....lb	...	1.10
Stearate, bbls....lb.	.18	.20
Manganese Glycerophosphate, 5 lb tins....lb.	2.90	3.00
Hypophosphite, USP, VIII 5 lb cans....lb.	1.35	1.40
Iodide, 1 lb bottles....lb.	...	5.35
MENTHOL, USP, 60 lb cases ....lb.	3.25	3.40
Synthetic, cases....lb.	2.50	2.75
Mercury Metal, 75 lb flasks...fl.	49.00	50.00
Bichloride, crys 25 lb box..lb.	...	.82
Gran powd, 100 lb kegs..lb.	...	.67
Bisulfate, 25 lb boxes....lb.	...	1.48
Blue Mass, 25 lb boxes....lb.	...	.84
Powd, 25 lb boxes....lb.	...	.85
Blue Ointment, USP, 50%, 25 lb cans....lb.	...	.91
Mild 30%, 25 lb cans....lb.	...	.64
33 1/3% mercury....lb.	...	.67
Calomel, 50 lb boxes....lb.	...	1.15
English....lb.	2.65	2.75
Iodide, green, 25 lb jars....lb.	...	3.95
Red, USP, 25 lb jars...lb.	...	3.55
Yellow, USP, VIII, 25 lb jars....lb.	...	3.65
Red precip Powd. USP, 25 lb. boxes....lb.	...	1.24
White precip, Powd., USP, 25 lb. boxes....lb.	...	1.31
Salicylate, 25 lb bot....lb.	...	2.32
With chalk, USP, 25 lb boxes ....lb.	...	.69
Methanol, Pure 1c-1 drs....gal	...	.44
Methyl Salicylate, USP, 50 lb cans....lb.	.40	.42
Methylene Blue, USP, med 5 lb cans....lb	2.00	2.05
Milk powd, 150 lb bbls....lb.	.09	.12
MORPHINE Alk, 5 oz tin...oz.	10.90	10.95
Acetate, 5 oz tins....oz.	8.75	8.80
Hydrobromide, 5 oz tins, 10 oz lots....oz.	8.75	8.80
Hydrochloride, 5 oz tins, 10 oz lots....oz.	8.75	8.80
Ethyl Hydrochloride, 5 oz tins 10 oz lots....oz.	...	10.85
Sulfate, 5 oz tins, 10 oz lots oz.	7.85	8.00
Naphthalene Flake, 175 lb bbls wks....lb.	.04½	.05
Balls, 250 lb bbls wks....lb.	.05½	.06
Oxgall, Purified, 5 lb bot....lb.	2.00	2.50
USP Extract, 5 lb. bot....lb.	1.80	1.90
Oxyquinoline Sulfate, tins...lb.	8.50	9.25
Pancreatin, USP, 100 lb....lb.	...	1.90
Paraffin, refd, 200 lb cs slabs 118 -120 deg MP....lb.	.08	.09
128-132 deg MP....lb.	.07½	.07¾
Para-Aldehyde, USP, 100 lb. carboys....lb.	.48	.50
Pepsin, USP, 100 lbs. 1:3000.lb.	...	2.25
100 lbs. 1:6000....lb.	...	4.00
100 lbs. 1:10000....lb.	...	6.50
Peptone, powd., or granular 5 lb. 100 lb. lots....lb.	.70	1.00
PHENOBARBITAL, U. S. P., 100 lb. lots....lb.	...	6.50
Phenolphthalein, U. S. P.... 100 lb drums....lb.	...	.52
5 lb cans 100 lb lots..lb.	...	.60
Yellow....lb.	...	.47
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots ....oz.	...	3.25
Nitrate, 25 oz lots....oz.	...	3.25
Single ounce....oz.	...	3.50
Alkaloid, 15 gr vials....vl.	...	.75
Piperadine, 25 oz bottles....lb.	...	8.00
Popodhyllin 5 lb bottles....lb.	4.35	4.50
Potassium Acetate, USP, 100 lb kegs....lb.	.29	.30
Bicarb, USP, crys 320 lb bbls ....lb.	.09½	.10
Bromide, USP, crys 100 lb cs ....lb.	.31	.32
Citrate, USP, 100 lb. box..lb.	.42½	.43
Guaiacol Sulfonate....lb.	1.95	2.25
Potassium Hypophosphite, 10 lb. cans....lb.	.65	.70
Iodide, USP, 50 lb cases...lb.	...	2.15
Lactophosphate, 4 oz bot..lb.	...	.90
Permangan, USP, crys, 100 lb drs wks....lb.	.16	.16½
Phosphate dibasic pure, kegs ....lb.	...	.49
Salicylate, 25 lb cans....lb.	...	1.18
Sulfate, USP, VIII, 100 lb kegs....lb.	.13	.15
Sulfocyanide, CP 15 lb jars lb.	...	.50
Tartrate, CP, tins....lb.	...	.65
Pyrogallol, USP, see Acid Pyrogallic....lb.	...	...
Quinidine Alk, 100 oz tins...oz.	.75	.80
Sulfate, 100 oz tins....oz.	...	.50
QUININE SULFATE, USP, 100 oz tins....oz.	...	.40
1 oz tins, 100 oz lots....oz.	...	.50
Acetate....oz.	...	.74
Arsenate....oz.	...	.76
Benzoate....oz.	...	.74
Bisulfate, USP....oz.	...	.40
Citrate....oz.	...	.50
Dihydrobromide....oz.	...	.54
Dihydrochloride, USP....oz.	...	.54
Ethyl Carbonate, 16 oz tins ....oz.	...	.54
Ferrocyanide....oz.	...	.74
Formate....oz.	...	.72
Glycerophosphate....oz.	...	.92
Hydrobromide, USP....oz.	...	.50
Hydrochlorosulfate....oz.	...	.54
Hypophosphite....oz.	...	.70
Lactate....oz.	...	.66
Phenolsulfonate....oz.	...	.78
Phosphate....oz.	...	.62
Salicylate, USP....oz.	...	.52
Tannate, USP....oz.	...	.40
Tartrate....oz.	...	.74
Valerate....oz.	...	.78
Urea Hydrochloride, USP....oz.	...	.54
Rennet, N. F. 5 lb 1:25,000...lb.	2.95	3.50
Resorcinol, USP, 25 lb cans..lb.	1.57	1.65
Rochelle Salt, USP, 225 lb bbl ....lb.	.11½	.12
Rock Sugar, 5 lb boxes....lb.	...	.15
Saccharin, USP, 10 lb cans...lb.	1.70	1.80
USP, Soluble, 10 lb cans...lb.	1.75	1.85
Salicin, USP....lb.	...	12.50
SALOL, USP, 100 lb drums..lb.	...	.90
Saltpetre, powd, bbls wks....lb.	.06½	.08½
Santonin, USP, bulk....lb.	.65	.70
Saponin, refined....lb.	1.30	1.50
Seidlitz Mixture, 250 lb bb..lb.	.10	.10½
Silver Metal, American....oz.	...	.29½
Iodide, 16 oz lots....oz.	...	.69
Nitrate, 100 oz bottles....oz.	.20½	.22½
Nucleinate, bulk....oz.	...	.37
Proteinate....oz.	.39	.41
SODIUM BENZOATE, USP, 100 lb bbls....lb.	.42	.47
Bromide, USP, 100 lb kegs.lb.	.31	.32
Cacodylate, USP, 25 lb bot ....lb.	4.75	5.90
Citrate, USP, X100 lb. box.lb.	.33½	.35½
USP VIII, 100 lb. box..lb.	.26½	.28
Glycerophosphate, N.F., crys 25 lb cans....lb.	1.27	1.33
Powder, 25 lb tins....lb.	1.32	1.38
Soln, USP, 25 lb tins...lb.	1.05	1.15
Hypophoshite, USP, 25 lb cans....lb.	.60	.65
Iodide, USP, 25 lb jars...lb.	...	2.75
Phosphate (Mono-Sodium), 100 lb kegs....lb.	.28	.29
Di-Sodium USP, granular, 275 lb bbls....lb.	.07½	.08
Pyrophosphate, 100 lb kegs ....lb.	...	.29
Salicylate, 100 lb kegs....lb.	...	.47
Sulfocarbolate, USP, 100 lb kegs....lb.	...	.25
Sulfocyanate, CP crys, jars included....lb.	...	.60
Spartein Sulfate, USP, 25 oz bulk....oz.	.65	.70
Single oz vial....oz.	.77	.90
STRONTIUM BROMIDE USP, 50 lb kegs....lb.	.46	.47
Carb, 100 lb kegs wks....lb.	...	.20
Iodide, USP, 25 lb jars....lb.	...	3.00
Lactate, kegs....lb.	.90	1.10
Nitrate, 600 lb bbls NY...lb.	.08	.08½
Imp. bbls NY....lb.	.08	.08½
Salicylate, USP, 100 lb keg lb.	...	1.10
Strophanthin, USP, 1 oz vial.oz.	19.00	19.00
Crystals....lb.	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins....oz.	...	.37
Powdered....oz.	...	.27
Acetate....oz.	...	.65
Arsenate, 25 oz cans....oz.	...	.65
Glycerophosphite, USP...oz.	...	.65
Hydrobromide....oz.	...	.65
Hydrochloride....oz.	...	.65
Hypophosphite....oz.	...	.75
Nitrate, USP....oz.	...	.60
Phosphate....oz.	...	.65
Sulfate, USP, powd....oz.	...	.24
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90
Milk, USP, 200 lb bbls...lb.	.18	.20
Sulfonethylmethane, USP, 10 lb boxes....lb.	3.85	4.05
Sulonmethane, USP, 10 lb box ....lb.	2.65	3.85
Sulfur flwrs. washed, USP, 125 lb bbl....lb.	...	.06
Iodide, USP, VIII, 5 lb bot lb.	...	3.85
TARTAR EMETIC, USP, 300 lb bbls....lb.	.26	.28
Terebene, tins....lb.	...	.85
Terpin Hydrate, USP, 100 lb kegs....lb.	.30	.32
Theobromine Alk, 5 lb cans..lb.	1.85	2.15
Sod. Salicylate, 1 lb bot...lb.	...	2.10
Sod. Benzoate, 1 oz vials..oz.	...	1.00
Thymol, USP, 25 lb tins....lb.	1.15	1.25
Iodide kegs....lb.	...	4.30
Veratrine Alkaloid....oz.	...	2.25
Sulfate, 1 oz vials....oz.	...	2.25
Witch Hazel Ext., 50 gal bbl ....gal.	.60	.80
Zinc Carb, USP, 100 lb keg..lb.	.28	.31
Chloride, USP, 25 jars ex..lb.	.24	.29
Iodide, 5 lb bottles....lb.	...	4.25
Oxide, USP, 100 lb bbls...lb.	.13	.14
Stearate, USP, 50 lb bbl..lb.	.15	.17
Sulfate, USP, 100 lb bbl..lb.	.08	.09
Sulfocarbolate, 100 lb kegs..lb.	.23	.26

Miscellaneous

Absorption Bases....lb.	.60	.75
Castor Oil, odorless, bbls....lb.	...	.12
Chalk drop, 175 lb. bbls...lb.	...	.03½
Precip. light, 250 lb. cask..lb.	...	.04½
Heavy 540 lb. casks....lb.	...	.02½
Bulk....ton	...	5.00
English light, bags....lb.	...	.04½
English light, casks....lb.	.05½	...
Cocoa Butter, fingers.... 12 lb. box....lb.	.24	.26
Cod Liver Oil Nor. 30 gal. bbls	17.50	21.00
Newfoundland....bbl.	...	25.00
Collodion U. S. P. 30 lb. dr...lb.	.13	.14
Colors certified; 1 lb. cans, 5 lb. cans		
Amaranth No. 107....lb.	2.55	2.65
Brilliant Blue F.C.F....lb.	13.25	13.50
Erythrosine No. 517....lb.	17.00	17.50
Orange Ind. 85....lb.	2.55	2.65
Ponceau 3R No. 56....lb.	5.25	5.50
Tartrazine No. 94....lb.	2.55	2.65
Corn Syrup 42° 50 gal. bbl. ....100 lb.	...	2.28
Gelatin, USP, Silver 100 lb. cases....lb.	.49	.55
Pure Food, 50 lb. bbl....lb.	.47	.49
Glucose, (grape sugar) dry 70° bags c-l NY....100 lb.	3.14	3.24
Haarlem Oil, bot 6 gross cases ....gross	...	3.25
Imported, 5 gr. cs....gross	...	3.35
Kaolin, Bags....lb.	.06	.08
Colloidal Grade 200 lb. tin lined wooden drums....lb.	.15	.29
Mineral Oil White, 50 gal. bbls. 80-85 vis....gal.	.45	.50
85-90 vis....gal.	.65	.70
125-130 vis....gal.	.75	.85
290 vis....gal.	.80	.90
Russian 80-85 vis....gal.	.55	.60
110-115 vis....gal.	.70	.75
145-155 vis....gal.	.73	.78
180-185 vis....gal.	.78	.83
320-330 vis....gal.	.83	.88
Olive Oil, Edible bbls....gal.	1.45	1.55
Paraffin Wax, fully refined, slabs 125 @ 127 A.M.P. bags lb	...	.03½
130 @ 132 A.M.P. bags lb.	...	.03½
135 @ 137 A.M.P. bags lb.	...	.04½
Petrolatum, Lily White, USP, 400 lb. bbl....lb.	.07½	.08½
Snow White USP, 400 lb. bbls....lb.	.09	.10
Rice Starch, 140 lb bags....lb.	.08	.09
Soap Castile, bars 40 lb. Case ....Cs.	...	12.75
Powd. USP 250 lb. bbls...lb.	.21	.23
Green, USP, 450 lb. bbls...lb.	.07½	.07½
Neutral, powd. 200 lb. bbls.lb.	.18	.20
Talc, Italian, 220 lb bags...ton.	55.00	75.00
French, 220 lb bags....ton.	40.00	45.00
Turtle Oil, gal....	3.50	5.00

Waxes, See Drugs & Spices

Aromatics and Essential Oils

Acetophenene, CP, 1 lb bot	lb.	3.50	3.65
Aldehyde, C 8 (Octyl) 1 lb bot	lb.	30.00	35.00
C 7, 1 lb bot	lb.	4.50	5.50
C 9 (Nonyl), 1 lb bot	lb.	40.00	45.00
C 10 (Decyl), 1 lb bot	lb.	30.00	35.00
C 14, 1 lb bot	lb.	12.00	14.00
C 16, 1 lb bot	lb.	16.00	18.00
AMYL ACETATE, pure, 25 lb cans	lb.	.43	.50
Butyrate, 1 lb bot	lb.	1.25	1.50
Butyrate, 5 lb bot	lb.	...	1.00
Cinnamate, 5 lb bot	lb.	9.50	9.75
Formate, 1 lb bot	lb.	...	1.75
Formate, 5 lb bot	lb.	...	1.60
Phenyl Acetate, 1 lb bot	lb.	4.50	5.00
Salicylate, 100 lb cbys	lb.	.70	.75
Anethol, 2 lb bot	lb.	.85	1.00
Anisic Aldehyde, 1 lb bot	lb.	3.10	3.60
Benzaldehyde, USP, 40 lb cbys	lb.	1.30	1.40
FFC, 40 lb cbys	lb.	1.35	1.45
Benzoic Ether, see Ethyl Benzoate			
Benzophenone, 1 lb bot	lb.	1.75	2.25
Benzyl Acetate, 100 lb cbys	lb.	.60	.80
Alcohol, 5 lb bot	lb.	.85	.95
BENZYL BENZOATE		1.10	1.15
Medicinal, FFC	lb.	...	1.40
Buytrate, CP, 1 lb bot	lb.	9.25	9.50
Benzyl Cinnamate, 1# bot	lb.	7.00	7.25
Formate, 1 lb bot	lb.	3.15	3.25
Propionate, 1 lb bot	lb.	2.25	2.40
Succinate, 1 lb bot	lb.	5.25	5.50
Valerate, 5 lb bot	lb.	3.00	3.25
Borneol, 1 lb bot	lb.	1.35	1.85
Bornyl Acetate, 1 lb bot	lb.	1.50	2.00
Bromstyrol, 25 lb cases	lb.	3.75	3.85
Butyl Anthranilate dom, 1 lb bot	lb.		
Carvol, 5 lb bot	lb.	3.00	3.40
Cinnamic Acid, 5 lb cans	lb.	3.25	3.50
Alcohol liquid, 1 lb bot	lb.	2.50	2.60
Crystallizable	lb.	3.50	4.00
Aldehyde	lb.	2.25	2.50
Imported, 1 lb bot	lb.	7.75	9.00
Citral, 25 lb cans	lb.	1.65	3.00
Citronellol 1 lb bot	lb.	2.00	2.25
Citronelyl Acetate, 1 lb bot	lb.	3.50	3.75
Coumarin, 25 lb cans	lb.	3.25	3.50
DECYL ALCOHOL	lb.	22.00	25.00
Diphenyloxide, 25 lb tins	lb.	1.05	1.20
Diphenyl Methane	lb.	1.75	2.00
Duodecyl Alcohol	lb.	24.00	26.00
Ethyl Acetate, pure, 5 lb bot	lb.	.05½	.06½
Benzoate, 5 lb bot	lb.	1.25	1.50
Ethyl Butyrate, 5 lb bot	lb.	1.80	2.00
Caproate, 1 lb bot	lb.	3.25	3.50
Cinnamate, 1 lb bot	lb.	4.00	4.50
Formate, 5 lb bot	lb.	1.00	1.25
Methyl Paracresol, 1 lb bot	lb.	3.25	3.50
Phenyl Acetate, 5 lb bot	lb.	3.75	4.00
Valerate, 5 lb bot	lb.	...	3.75
Salicylate, 5 lb bot	lb.	1.95	2.00
Eucalyptol, USP, 50 lb cans	lb.	.55	.60
Eugenol, USP, 25 lb cans	lb.	2.00	2.50
Geraniol, 50 lb cases	lb.	1.75	2.35
Geranyl Acetate, 1 lb bot	lb.	2.75	2.80
Butyrate, 1 lb bot	lb.	13.00	13.50
Formate, 1 lb bot	lb.	12.00	12.50
Heliotropin, 100-10 lbs	lb.	1.65	1.75
Imported	lb.	1.95	2.05
Hydroxycitronellal, 1 lb	lb.	2.90	4.00
Indol, CP, 1 oz bot	oz.	2.90	3.00
IONONE, 1 lb bot 100%	lb.	4.00	4.50
Alpha	lb.	5.75	6.00
Beta	lb.	4.50	5.00
Methyl	lb.	5.00	5.25
Iso Borneol	lb.	2.25	2.35
Iso Bornyl Acetate	lb.	3.00	3.20
Iso-Butyl Benzoate, 5 lb bot	lb.	2.75	3.00
Iso-Eugenol, 1 lb bot	lb.	2.85	2.90
Iso-Safrol, 1 lb bot imp	lb.	1.75	1.85
Domestic, 5 lb bot	lb.	3.50	3.75
Linalol from Bois de Rose, 5 lb bot	lb.	1.65	3.50
Linalyl Acetate, 1 lb bot	lb.	2.25	2.35
Benzoate, 1 lb bot	lb.	13.00	14.00
Formate, 5 lb bot	lb.	10.50	12.00
METHYL ACETOPHENONE	lb.	2.00	2.15
Anthranilate, 1 lb bot	lb.	2.10	2.20
Imported	lb.	2.70	2.75
Benzoate, 5 lb bot imp	lb.	1.25	1.35
Domestic, 5 lb bot	lb.	1.25	1.35
Cinnamate, 1 lb bot	lb.	3.35	3.85
Heptenone, 1 lb bot	lb.	3.50	4.00
Paracresol, 1 lb bot	lb.	4.50	8.00
Phenylacetate, 5 lb bot	lb.	2.50	2.75
Salicylate, USP, 500 lb dr	lb.	...	.40
50 lb cases	lb.	...	.42
Mirbane rect. 1,000 lb drs	lb.	.12	.13
Musk Ambrette 1 lb cans	lb	6.00	6.25
Ketone 1 lb cans	lb	7.55	7.80
Xylene 5 lb cans	lb.	2.25	2.85
Nerolin 1 lb cans	lb.	1.35	1.40
Octyl Alcohol 1 lb bot	lb.	18.00	20.00
Oenanthic Ether lb bot	lb.	1.90	2.00
Oleoresin Aspidum, USP, bot and tins	lb.	...	1.25
Capsicum, USP, bot and tins	lb.	2.10	2.20
Cubeb, USP, bot and tins	lb.	2.30	2.60
Ginger bot and tins	lb.	2.20	2.50
Male fern see Aspidum			
Orris, bot & tins	lb.	12.00	15.00
Pepper, black, USP, bot & tin	lb.	...	9.50
Vanilla, bot & tins	lb.	7.00	7.75
Paracresol Methyl Ether	lb.	4.25	4.50
Paracresyl Acetate	lb.	5.50	5.75
Para Cymene Refd 110 gal dr	gal.	2.25	2.50
PHENYLACETALDEHYDE 50% 1 lb bot	lb.	4.50	4.75
Imported 50%	lb.	4.50	4.75
100%	lb.	8.00	8.25
Phenylacetic Acid 1 lb bot	lb.	2.65	2.90
Phenyl Diacetate 1 oz bot	oz.	3.00	3.25
1 lb bot	lb.	8.00	10.00
Imported	lb.	7.00	7.75
Phenylethyl Alcohol 1 lb bot	lb.	3.75	4.00
Phenyl Ethyl Acetate	lb.	8.25	8.75
Butyrate 1 lb bot	lb.	15.00	16.00
Formate, 1 lb bot	lb.	19.00	21.00
Propionate, 1 lb bot	lb.	10.00	12.00
Valerate, 1 lb bot	lb.	14.00	15.00
Phenylpropylalcohol, 1 lb bot	lb.	8.50	9.00
Rhodinol, 1 lb bot	lb.	12.00	15.00
Skatol, 1 oz bot	lb.	4.50	7.00
Terpinyl Acetate, 25 lb cans	lb.	.85	.90
Imported, 25 lb cans		.85	.90
TERPINEOL, CP, 1000 lb drs	lb.	.29	.30
50 lb cans	lb.	.31	.33
Absolute, 25 lb cans	lb.	.48	.50
TOLYL ALDEHYDE, F.F.C. 40 lb. carboys	lb	2.10	2.25
Valerianic Ether see Ethyl Valerate			
Vanillin (Clove Oil), USP	lb.	5.50	5.75
(Guaiacol) USP	lb.	5.00	5.25

Essential Oils

Almond Bitter, USP, 5 lb bot	lb.	2.15	2.25
Bitter, ffPA, 5 lb bot	lb.	2.25	2.35
Sweet, 56 lb cans	lb.	.38	.42
Almond Meal, 25 lb cans	lb.	.20	.21
Amber crude, 25 lb tins	lb.	.16	.18
Rectified, 25 lb tins	lb.	.50	.53
Amber liquid, 400 lb drs	lb.	2.20	2.30
Ambergris, Black, boxes	oz.	14.00	15.00
Gray boxes	oz.	25.00	30.00
Angelica Root, 1 lb bot	lb.	19.00	29.00
Anise Tech, 400 lb drums	lb.	.29	.31
USP, 60 lb cans	lb.	.31	.33
Apricot Kernel, 50 lb cans	lb.	.22	.23
Bay, 25 lb tins N. F. V., 50.55% Phenol	lb.	1.50	1.65
Terpeneless	lb.	4.25	4.45
BERGAMOT, 25 lb coppers	lb.	1.35	2.00
Terpeneless	lb.	6.25	8.00
Artificial, 25 lb cans	lb.	1.00	1.50
Birch, Sweet, Northern, 25 lb tins	lb.	3.00	3.10
Southern, 25 lb tins	lb.	...	1.85
Birch Tar, rect., 5 lb bot	lb.	.50	.55
Crude, 50 lb tins	lb.	.13	.14
Bois de Rose, tins Brazilian	lb.	.95	1.10
Cayenne, tins	lb.	1.90	2.10
Cade, 25 lb cans	lb.	.24	.25
Cajuput, native, 50 lb tins	lb.	.48	.60
Calamus, 5 lb bot	lb.	2.75	3.00
Camphor Sassa, 1000 lb drs	lb.	.10	.12
White, 400 lb drs	lb.	.11	.13
Cans, 50 lbs	lb.	.13	.15
CANANGA, Native 25 lb tins	lb.	1.60	1.75
Rectified, 25 lb tins	lb.	2.05	2.20
Caraway, USP	lb.	1.35	1.40
Cardamon, NF, 1 lb bot	lb.	15.00	16.00
Cascarilla, 1 lb bot	lb.	56.00	70.00
Cassia, Redist, USP, 50 lb cans	lb.	.78	.85
Cedar Leaf, 50 lb tins	lb.	.55	.60
Cedar Wood, light, 1000 lb drs	lb.	.25	.30
Celery, 1 lb bot	lb.	8.50	10.00
Chaulmoogra, USP 80 lb cases	lb.	...	1.50
Cinnamom Ceylon, 1 lb bot	lb.	8.00	10.00
Leaf, 5 lb bot	lb.	1.85	1.95
CITRONELLA Ceylon, 1000 lb drs	lb.	.34	.35
50 lb tins	lb.	.35	.36
Java, 400 lb drs	lb.	.45	.50
50 lb tins	lb.	.47	.53
Civet, Abyssin, horns	oz.	2.10	3.00
Cloves, USP, 50 lb cans	lb.	.75	.85
6 lb bot	lb.	.85	.90
Copaiba	lb.	.45	.50
Coriander, USP, 10 lb bots	lb.	3.90	4.15
Croton USP, 25 lb tins	lb.	2.30	2.50
Cubebs, USP, 5 lb bot	lb.	2.40	2.60
Cumin, 1 lb bot	lb.	7.00	7.50
Dill, 25 lb cans	lb.	3.00	5.25
Erigeron, 20 lb tins	lb.	.95	1.05
EUCALYPTUS Austl, USP, 56 lb cans, cases	lb.	.22	.24
500 lb drs	lb.	.20	.21
Fennel, USP, 25 lb tins	lb.	1.00	1.25
Geranium African, 25 lb tins	lb.	4.25	5.00
Bourbon, 28 lb tins	lb.	4.20	4.75
Turkish, 28 lb tins	lb.	1.65	1.85
Ginger, 1 lb bot	lb.	3.20	3.45
Gingergrass, 28 lb tins	lb.	2.50	2.70
Grape Fruit	lb.	2.75	2.85
Hemlock, 25 lb tins	lb.	.85	1.00
Juniper Berries, USP, 25 lb tins	lb	1.20	2.00
Wood, 50 lb tins	lb.	.50	.60
Labdanum, 5 lb bot	lb.	5.50	6.00
LAVENDER, USP, 28 lb tins	lb	1.40	2.00
Spike Spanish, 50 lb cans	lb.	.48	.65
Lemon Ital, 25 lb cans	lb.	.75	1.10
California 35 lb cbys	lb.	...	.65
Lemongrass, native, 50 lb cans	lb.	.42	.45
Limes, expressed, 25 lb tins	lb.	10.00	12.50
Distilled, 25 lb tins	lb.	6.50	7.00
Linaloe Mex., 70 lb cases	lb.	...	1.40
Mace, distilled, 50 lb tins	lb.	.85	.90
Mandarin, 25 lb cases	lb.	3.75	4.00
Musk Pods Cabardine, tins	lb.	...	...
Musk Tonquin, tins, Pods	oz.	18.00	20.00
Tonquin, tins, Grained	oz.	20.00	22.00
MUSTARD, USP, 1 lb bots	lb.	8.50	9.00
Artif, USP, 5 lb bot	lb.	1.50	1.60
Neroli Bigarade, ¼ & ½ & 1 lb bot	lb.	75.00	105.00
Petale, 1 lb bot	lb.	95.00	105.00
Artificial, 1 lb bot	lb.	5.00	15.00
Nutmeg, USP, 50 lb tins	lb	.85	.90
ORANGE BITTER, 25 lb tins	lb	1.10	1.50
Sweet W Ind, 25 lb tins	lb	1.05	1.25
Italian, 25 lb cop	lb	1.00	1.25
Orange American, Cold pressed 25 lb tins	lb.	...	.70
Distilled, 25 lb tins	lb.	...	.48
Spanish, 25 lb tins	lb.	...	1.20
Oil Orris, concrete	oz.	4.00	4.25
Origanum, 50 lb cans tech	lb.	.25	.27
Parsley, 1 lb bot	lb.	6.50	6.75
Patchouli, 5 lb bot	lb.	3.25	4.00
Pennyroyal, dom, 25 lb tins	lb.	1.65	1.75
Imported, 25 lb tins	lb.	...	1.25
Pepper Black lb.		...	6.00
Peppermint, nat. 60 lb cases	lb.	1.85	1.95
Redis, USP, 60 lb cs	lb.	2.00	2.10
Petit Grain S A., 25 lb tins	lb.	.90	.95
French, 1 lb bot	lb.	4.50	4.75
Italian, 25 lb tins	lb.	2.20	2.30
Pimento Leaf, 25 lb tins	lb.	1.15	1.30
Berries, 25 lb tins	lb	3.00	3.10
Pine Needle Siberian, cans	lb.	.80	1.00
Pinus, Sylvestris, 25 lb tins	lb.	1.30	2.00
Pumilio, USP, 25 lb tins	lb.	1.90	1.95
Rose Fr, 8, 16, & 32 oz pkgs	lb.	14.00	17.00
Bulg, 8, 10 & 32 oz pkgs	oz.	6.00	17.00
Rosemary, USP, 27½ lb tins	lb.	.34	.40
1000 lb drums	lb.	.32	.38
Tech, 25½ lb tins	lb.	.26	.28
Rue, 1 lb bot	lb.	2.00	2.25
SANDALWOOD, E Ind, USP, 100 lb case	lb.	5.50	6.50
W Indian (Amyris), 25 lb tins	lb.	2.85	2.95
Australian, Tins		2.95	3.25
Sassafras, USP, 50 lb cans	lb.	.60	.90
Artificial, 1000 lb drs, 60 lb cans	lb.	.16	.18
Safrol, cans	lb.	.22	.24
Sage, Dalmatian, 25 lb. cans	lb.	2.00	2.10
Savin, 50 lb tins	lb.	1.85	2.00
Snakeroot, Canada	lb.	8.25	8.50
SPEARMINT, USP, 50 lb tins	lb	.90	1.10
Spruce, 50 lb tins	lb	.70	.75
Tansy, American, 25 lb tins	lb.	1.70	1.90
Tar, 50 gal bbls	lb.	.25	.30
USP, 50 gal bbls	lb.	.75	1.50
Thyme, red, NF, 25 lb tins	lb.	.60	.75
White, NF, 25 lb tins	lb.	.65	.80
Tech, 110 lb drums	lb.	.50	.55
Turpentine, USP, rect cbys	lb.	.27	.30
Vetivert Bourbon, 10 bot	lb.	4.00	4.25
Indian, 1 lb bot	lb.	25.00	38.00
Java, 1 lb bot	lb.	12.00	13.00
Wine, heavy, 1 lb bot	lb.	1.50	1.60
WINTERGREEN Gaultheria, true, 25 lb tin	lb.	8.00	10.00
Southern, 25 lb tins	lb.	3.75	4.00
Synthetic see Methyl salicylate			
Wormseed, Balt, 25 lb tins	lb.	1.85	2.15
Wormwood, dom, 25 lb tins	lb.	2.25	2.75
Ylang Ylang Bourbon, 10 lb tins No. 1	lb.	4.00	4.25
10 lb tins No. 2	lb.	3.00	3.50
Manila, 1 lb bot	lb.	22.00	27.00

Drugs and Spices

Aconite Root, USP, bags	lb.	.13 .14
Agar Agar, No. 1, bales	lb.	.47 .50
Agar Agar No. 2, bales	lb.	.42 .45
Almonds Meal	lb.	.20 .25
Aletris Root, bags	lb.	.16 .18
Alkanet Root, bags	lb	.09 .10
ALOES, Cape, 400 lb cases	lb.	.09 .10
Curacao, 140 lb cases	lb.	.10 .11
Socotrine, Whole, 300 lb cs	lb.	.28 .31
Althea Root, bags	lb.	.14 .16
Cut cases	lb.	.13 .15
Angelica Root, bags	lb.	**.12 .13**
Angostura Bark, bags	lb	.18 .19
Anise Star case	lb	.11 .12
Spanish, bags	lb	.08½ .09½
ARABIC GUM, White, No. 1, 220 lb bags	lb.	**.14 .15**
Seconds, 220 lb bags	lb.	.13 .14
Sorts, Amber, 220 lb bags	lb.	.06 .06½
Powd, USP, 300 lb bbls	lb.	.10 .13
Areca Nuts, 100 lb bbls	lb.	.05 .07
Powd, 100 lb bbls	lb.	.10 .11
Arnica Flowers, bales	lb.	.08 .09
Root, bags	lb.	.40 .41
Arrowroot, St. Vincent, powd bbls	lb.	.08 .09
Asafoetida, 250 lb cases	*lb.*	*.16 .17*
Powd, 50 lb boxes	lb.	.32 .35
Balm Gilead Buds, bags	lb.	**.22 .23**
Balmony Herbs, bales	*lb.*	*.10 .12*
BALSAM COPAIBA Para, 80 lb cases	lb.	**.16 .17**
South American, USP, 80 lb cases	lb.	.18 .22
Peru, 120 lb cases	lb.	.85 .90
Tolu, 90 lb cases	*lb.*	*.72 .82*
Barberry Bark, of root, bags	lb.	.15½ .16½
Bayberry Bark, bales	lb.	.07 .08
Wax bbls	*lb.*	*.15 .17*
BELLADONNA LEAVES, bale	lb.	.10 .12
Root, bags	*lb.*	*.11 .12*
Bees Wax, White, cases	lb.	.30 .34
Yellow refined cases	lb.	.21 .24
Yellow Crude Bags	*lb.*	*.16 .17*
Benzoin Gum, Siam, boxes	lb.	1.00 1.25
Sumatra, cases	lb.	.18 .20
Berberis Aquafolium Root, bags	lb.	.08 .09
Beth Root, bags	lb.	.08 .09
Black Indian Hemp Root, 100 lb bags	*lb.*	*.10 .11*
Blood Root, bags	lb.	.10 .11
Blueflag Root, bags	*lb.*	**.12 .13**
Boldo Leaves, bales	*lb.*	*.15 .17*
Boneset Herb, bales	lb.	.08 .09
Borage Flowers, bales	lb.	.17 .19
Broomtop Herb Cut, bales	lb.	.07 .08
Bryonia Root, bags	lb.	.09 **.10**
BUCHU LEAVES Short, 250 lb. bales	lb.	.20 .22
Long bales	lb.	.75 .80
Buckbean Leaves, bales	lb.	.08½ .09
Buckthorn Bark, bags	lb.	.04½ .05½
Berries, bags	lb.	.29 **.34**
Burdock Root, bags	lb.	.07 .08
Seed bags	lb.	.30 ...
Burgundy Pitch, 110 stand gross for net	lb.	.08 .09
Imported	lb.	.10 .11
Calabar Beans, bags	lb.	**.15 .16**
Calamus Root, blchd cases	lb.	.25 .27
Unbleached, bags	lb.	.07 .08
Calendula Petals, imp bales	lb.	.45 .48
Calisaya Bark, bales	lb.	.19 .20
Powdered, bbls	lb.	.24 .25
Canary Seed, South America, bags	lb.	.03¼ .03¾
Morocco	lb.	.03½ .04
Turkish	lb.	.03½ .04
Candelilla Wax, bags	lb.	**.12** .14
Cannella Alba Bark, bales	lb.	.25 .26
Cannabis, U.S.P.	lb	.16 .23
Cantharides, Chinese, cases	lb.	1.00 1.05
Powdered, boxes	lb.	1.15 1.25
Russian, cases	lb.	No stocks
Powdered, boxes	lb.	No stocks
Caraway Seed, African, bags	lb.	No stocks
Dutch, 11 lb bags	lb.	.07½ .08
Cardamon bleached, cases	lb.	.88 .93
Decorticated, cases	lb.	.50 .52
Carnauba Wax No. 1, 100 lb. bags	lb.	.22 .23
Cascara Amarga, 150 lb bbls	lb.	... .30
So called bales	lb.	.25 .30
CASCARA SAGRADA, 1930 bark	lb.	.11 .12
1931 bark	lb.	.10 .11
1932 bark	lb.	.09 .10
Cascarilla Bark, quills, bales	lb.	.65 .70
Siftings, bbls	lb.	.50 ...
Cassia Batavia No. 1 bbls	lb.	.07 .07½
Shortstick, bales	lb.	.06 .06½
Batavia No. 3, bales	lb.	.05½ .06
China Select Rolls, cases	lb.	.02½ .03½
Broken, bales	lb.	.05½ .05½
Saigon, thin	lb.	.19½ .20
Buds, cases	lb.	.17 .18
Fistula, baskets	lb.	.10 .11
Catnip, Herb, bales	lb.	.15 .16
Celery Seed, bales	lb.	.36½ .37
Ceresin Wax, White, bags	lb.	.10 **.15**
Yellow 200 lb. bags	lb.	.09 **.12**
Imp white 100 lb. bags	lb.	.21 .38
CHAMOMILE FLOWERS Roman, bales	lb.	.25 .28
Hungarian, cases	lb.	.14 .15
Charcoal Willow, powd, bbls	lb.	06 .06½
Wood, powd, bbls	lb.	.04 .05
Chestnut Bark	lb.	.07 .08
Leaves bales	lb.	.05 .06
Chicle Gum, 200 lb. bales	lb.	.27 .30
Chiretta, bales	lb.	.12 .15
Cinnamon, Ceylon, No. 1, bales	lb.	**.12** .14
No. 2 bales	lb.	.09½ .10
No. 3 bales	lb.	.11½ .12
Clover Tops, Red, bags	lb.	.09 .11
Cloves Zanzibar, 135 lb bbl	lb.	.09½ .10
Cochineal, Black	lb.	.51 ...
Silver	lb.	.45 ...
Cohosh Root, Black, bags	lb.	.05 .06
Blue, bags	lb.	.06 .07
Colchicum Root, bags	lb.	.11 .13
Seed, bags	lb.	.60 .65
COLOMBO ROOT, bags	lb.	.05 .06
Colocynth Pulp, bales	lb.	.12 .13
Coltsfoot Leaves, bags	lb.	.06 .07
Comfrey Root, bags	lb.	.11 .12
Condurango Bark, bags	*lb.*	.09 .10
Coriander Seed, Morocco, bags	lb.	.06 .07
Bleached, bags	*lb.*	.08 .09
Corn Silk, bales	lb.	.05½ .06½
Cotton Root Bark, bales	lb.	.06 .07
Cowhage, 1 oz tins	*lb.*	*1.00 ...*
Cramp Bark so called bales	lb.	.06 .07
True, bags	lb.	.25 .27
Cranesbill Root, bags	*lb.*	*.08 .09*
CUBEB BERRIES, XX bags	lb.	.30 .31
Powdered, boxes	*lb*	*.32 .33*
Culvers Root, bags	lb.	.11 .12
Cumin Seed, Malta, bags	lb.	No stocks
Morocco, bags	*lb.*	*.09½ .10*
Cuttlefish, Bone Trieste, Straps	lb.	.19 .22
French, boxes	*lb.*	*.18 .21*
Powdered, bbls	*lb.*	*.09 .10*
Broken, bales	lb.	.07 ...
Damiana Leaves, bales	*lb.*	**.15 .16**
Dandelion Root, Imp. bags	*lb.*	*.09¼ .10*
Deer Tongue Leaves, bales	lb.	.07 .09
Digitalis Leaves, bales	*lb.*	*.14 .15*
Dogwood Bark, Jamaica bags	lb.	.07 .08
American bales	*lb.*	*.06½ ...*
Doggrass Root, USP, cut bags	lb.	.11 .12
Dragons Blood Mass, cases	lb.	.80 .85
Reeds, boxes	lb.	.90 .95
Echinacea Root, bags	lb.	.15 .16
Elcampane Root, bags	lb.	.06 .07
Elder Flowers, bags	lb.	.13 .16
Elemi Gum, 85 lb cases	lb.	.09½ .10
Elm Bark, bundles	lb.	.14 .17
Grinding bags	lb.	.08 .09
Powdered, bbls	lb.	.13 .16
Ephedra Vulgaris, bales	lb.	.05 .06
ERGOT, 150-200 lb bags	lb.	.35 .45
Eucalyptus Leaves, bales	lb.	.05 .06
Euphorbia Pilulifera, Herb, bags	lb	.05 .08
Euphorbium Gum, cases	lb.	.14 .20
Fennel Seed, French, bags	lb.	.06½ .07
German bags	lb.	.08 .09
Foenugreek Seed, 200 lb bags	lb.	**.04 .04¼**
Fish Berries, 100-125 lb bag	lb.	.15 .16
Flax Seed, Whole 182 lb bbls	lb.	.05½ .06½
Ground, 180 lb bbls	lb.	.06 .07½
Fringe Tree Bark or Root bags	lb.	.10 .12
Fumigating Pastiles, boxes	lb.	.28 .30
Galangal Root, bags	lb.	.08 .09
Galbanum Gum, cans	lb.	.85 .90
Gamboge Gum, 100 lb cases	lb.	.45 .50
Powdered, cases	lb.	.55 .60
Gelsemium Root, bags	lb.	.07 .08
GENTIAN ROOT, bags	lb.	.09½ .10¼
Ground bbls, boxes	lb.	.13 .14
Powdered, bbls, boxes	lb.	.13 .14
Ginger, African, bags	lb.	.05 .06
Jamaica Grinding bags	lb.	.10 .12
Cochin ABC & Lemon, bags	lb.	.07¼ .07½
Ginseng Root, cultivated cs	lb.	8.00 10.00
Wild Southern, cases	lb.	11.00 13.00
Golden Seal Root, bags	lb.	.65 .70
Powdered, boxes	lb.	.90 1.00
Herb, barrels	lb.	.35 .40
Grains of Paradise, bags	lb.	.10 .12
Grindelia Robusta, Herb, bale	lb.	.07 .08
Guaiac Gum, 150 lb cases	lb.	.25 .26
Strained 75 lb cases	lb.	.70 .75
Guarana, tin cases	lb.	.60 .65
Hellebore Root, Black, bbls	lb.	.05½ .06
White, 250 lb bbls	lb.	.13 .14
Powdered	lb.	.15 .16
Helonias Root, bags	lb.	.25 .27
Hemp Seed, bags	lb.	.02¾ .03
Henbane Leaves, USP, bales	lb.	.07 .08
HENNA LEAVES, bales	lb.	.07 .08
Powdered	lb.	.10 .12
Hops, bales	lb.	.30 .33
Horehound, Herb, bales	lb.	.07 .08
Hydrangea Root, bales	lb.	.06 .07
IPECAC ROOT, Carteagna, bags	lb.	.75 .80
Powdered, 220 lb bbls	lb.	.90 .95
Nicaraugua. 125 lb. bags	lb.	.60 .65
Isinglass, American, 130 lb cases	lb.	.95 1.00
Russian (Beluga), boxes	lb.	4.50 ...
Jaborandi Leaves, bales	lb.	**.10 .11**
Jalap Root, Whole, 150 lb bag	lb.	.16 .18
USP, Powd, 250 lb bbls	lb.	.20 .23
Japan Wax 224 lb. cases	lb.	.06 .07
JUNIPER BERRIES, 125 lb bags	lb.	**.05 .05½**
Kamala, boxes	lb.	.16 .18
Karaya Gum, No. 1 Powdered, bbls	lb.	.11 .11½
Kava Kava Root, bags	lb.	.13 .14
Kino Gum, Black, cases	lb.	.50 .55
Kola Nuts, 150 lb bags	lb.	.05½ **.06**
Lady Slipper Root, bags	lb.	.30 .35
Larkspur Seed, bags	lb.	.25 .27
Laurel Berries, bags	lb.	.08 .09
Leaves, Greek, bags	lb.	.04½ .05
Italian, bales	lb.	No stocks
Lavender Flowers, Ordinary	*lb.*	*.15 .20*
Selected	lb.	.24 .28
Lemon Peel, bags	lb.	.08 **.09**
LICORICE ROOT, Whole bbls	lb.	.12 .15
Spanish Natural bales	*lb.*	*.05½ .07*
Powdered, bbls	lb.	.08 .10
Selected Cases	lb.	.12 .15
Cutting, 125 lb bags	ln.	**.06 .06½**
Turkish, 150 lb bales	*lb.*	*.05 ...*
Linden Flowers with leaves, bales	lb.	**.18 .19**
Without leaves, bales	*lb.*	*.21 .22*
Liverwort Leaves, bales	lb.	.13 **.14**
Lobelia, Herb, bales	*lb.*	*.15 .16*
Seed, bags	*lb.*	*.21 .26*
Lovage Root, Imp., bags	lb.	.15 **.17**
Lupulin N. F., tins	lb.	1.45 1.50
Lycopodium, 88 lb. cases	*lb.*	*.21 .23*
MACE SIAUW, No. 1, cases	lb.	**.28 .29**
Banda No. 1, cases	lb.	*.35 .36*
Batavia No. 2, cases	lb.	.31 .32
Malva Flowers, Blue, bales	lb.	.60 .65
Black, bales		*.20 .35*
Leaves, bales	lb.	**.12 .13**
Manaca Root, bales	lb.	**.20 .21**
Manna, Large Flake, cases	lb.	.40 .45
Small Flake, cakes	lb.	.25 .30
Sorts, cases	lb.	**.45 .50**
Mandrake Root, bags	lb.	**.08 .09**
Marjoram, Herb	lb.	.19 .20
French, No. 1 bales	lb.	.16 .17
German, bales	lb.	.30 .32
Mastic Gum, 120 lb. cases	lb.	.20 .22
Matico Leaves, bales	lb.	**.15 .16**
Mezereon Bark, bags	lb.	**.02¼ .03**
Millet Seed, Yellow, bags	lb.	.04 .04½
Montan Wax, Crude, bags	lb.	.25 .27
Bleached, pure. bags	lb.	.09 .11
Moss, Iceland, bales	lb.	.10 .12
Irish, Bleached, bales	lb.	.90 .95
Mullein Flowers, tins	lb.	**.07 .07½**
Leaves, bales	lb.	.06 .07
Musk Root, Russian, bags	lb.	.20 .22
Myrrh Gum, 200 lb, cases	lb.	.22 ...
Nutgalls, Chinese, bags	lb.	... **.20**
Aleppy, bags	lb.	.13 .15
Powdered, bags	lb.	.10½ .11
Nutmegs, 110's cases	lb.	.12½ .13
75's & 80's cases	lb.	.18 .19
Grinding, bags	lb	
NUX-VOMICA Buttons, bag	lb.	**.05 .06**
Powdered, 200 lb bbls	lb.	.08 **.09**
Oak Bark, bags	lb.	.05½ .06
Olibanum Gum, 280 lb cases	lb.	.06 .07
Siftings	lb.	.19 .21
Tears, No. 1 Extra	lb.	.13 .15
No. 2	lb.	.09 .10
No. 3	lb.	12.00 13.00
Opium Gum, USP, cases	lb.	13.00 14.00
Granular, cans	lb.	13.00 14.00
Powdered, USP, cans	lb.	.25 .30
Orange Flowers, cases	lb.	**.08 .09**
Peel, Bitter, bags	lb.	.07 .08
Sweet bags,	lb.	
ORRIS ROOT, Flor. bid. bags	lb.	.07½ .08¾
Powdered, 200 lb bbls	lb.	.12 .13
Verona, bags	lb.	.06 .07
Powdered, 200 lb bbls	lb.	.10½ .11
Fingers, boxes	lb.	.80 .85
Ozokerite Wax, Brown, Hard	lb.	...
Bags	lb.	**.24 .25**
Green, Hard, bags	lb.	**.25 .27**
Yellow, Refined, bags	lb.	.20 .25
Papain, Crude, 150 lb cases	lb.	1.40 1.45
Pure, Powdered, 10 lb bot	lb.	1.50 1.55
Paprika, bags	lb.	.20 .23
Pareira Brava Root, bags	lb.	.13 .14
Passion Flower, bales	lb	**.04½ .05½**
Patchouli Leaves, bales	lb.	**.15** .16
Pennyroyal, Herb, 100 lb bags	lb.	**.08 .09**
Leaves, 100 lb bags	lb.	.12 .13

Drugs and Spices

PEPPERMINT LEAVES, Imp bales	lb.	.18 .26
Domestic, bales	lb.	.17 .21
Pichi Leaves, bags	lb	.08 .09
Pimento Select, bags	lb.	.04½ .05
Pink Root, True, bags	lb.	.25 .27
Pleurisy Root, bags	lb.	.13 .14
Poke Berries, bags	lb.	.15 .16
Root, 200 lb bales	lb.	.06 .06½
Pomegrant Bark of Root, bags	lb.	.28 .30
Bark of Fruit, bags	lb.	.20 .25
Bark of Tree, bags	lb.	.15 .18
POPPY FLOWERS, Red, bags	lb.	.40 .45
Prickly Ash Bark	lb.	.12 .15
Southern bags	lb.	.11 .11½
Northern, bags	lb.	.11 .12
Berries, bags	lb.	.20 .21
Prince's Pine, bales	lb.	.15 .20
Psyllium Seed, Black, bags	lb.	.08 .11
Plantago Seed, Blonde, Bags	lb.	.05 .06½
Pulsatilla, Herb, bags	lb.	.10 .11
Pumpkin Seed, bags	lb.	.11 .12
Pyrethrum Flowers	lb.	.16 .17
Pwd., pure, 200 lb.bbls.	lb.	.20 .21
Quassia Chips, bags	lb.	.05½ .06
Quebracho, bulk, 125 lb. bbl.	lb.	.20 .21
Quince Seed, Spanish bags	lb.	1.05 1.20
Persian, bags	lb	1.10 1.55
Rape Seed, South American, bags	lb.	No stocks
Dutch, bags	lb.	.05 .05½
Raspberries, Dried, bbls.	lb.	.27 .32
Red Saunders, bags	lb.	.08 .09
Rhatany Root, bags	lb.	.11 .12
Rhubarb Root, HD, cases	lb.	.17 .18
Powdered, bbls.	lb	.22 .23
Rosemary Leaves, bales	lb.	.05 .05½
Flowers, cases, bales	lb.	.28 .32
Rose Petals, pale	lb.	.14 .15
Red	lb.	.45 .50
Rue, Herb, bales	lb.	.18 .20
Sabadilla Seed, bags	lb.	.11 .12
Powdered, bbls.	lb.	.13 .14
SAFFRON FLOWERS, American, bales	lb.	.17 .18
Valencia, 1 lb cans	lb.	10.50 10.75
Sage Dalmatian, bales	lb.	.04½ .05½
Sandarac Gum, 300 lb bbls.	lb.	.23½ .25
Sarsaparilla Root, Honduras, bales	lb.	.55 .60
Mexican, bales	lb.	.13 .14
Sassafras Bark, Ordinary, bales		.08 .10
Select, bales	lb.	.12 .15
Savory Leaves, bale	lb.	.05½ .06½
Saw Palmetto Berries, bags	lb.	.07 .08
Scammony Resin, boxes	lb.	1.30 1.35
Root, bags	lb.	.06 .07
Senega Root, bags	lb.	.35 .40
SENNA ALEX., 150 lb cases	lb.	.20 .25
Half leaf 150 lb bales	lb.	.08 .10
Sifting, 400 lb bales	lb.	.08½ .09½
Tinnevelly, Bold, 350 lb bales	lb.	.09 .11
Medium Leaf	lb.	.07½ .08½
Small Leaf	lb.	.06 .08
Pods, 350 lb	lb.	.08 .09
Powdered, 200 lb	lb.	... .09
Serpentaria Root, bags	lb.	.32 .33
Simaruba Bark, bales	lb.	.24 .26
Skullcap Leaves, Eastern, bales	lb.	.25 .30
Western, bales	lb.	.14 .24
Skunk Cabbage, Natural, bales	lb.	.11 .13
Snake Root, Canada Natural, bags	lb.	.18 .19
Canada, Stripped, bags	lb.	... .45
Soap Bark	lb.	.08 .09
Cut, 125-175 lb bags	lb.	.05½ .06½
Crushed, 200 lb bbls.	lb.	.15 ...
Powdered, bbls.	lb.	.09 .10
Spearmint Leaves, American, bales	lb.	.18 .19
Spermaceti, blocks, cakes, cases	lb.	.21 .23
Bulk	lb.	.20 .22
Spikenard Root, bags	lb.	.07 .08
Squaw Vine, bales	lb.	.11 .12
Squills, White, tested	lb.	.05 .07
Powdered, bulk	lb.	.13 .15
Stavesacre Seed, bags	lb.	.13 .14
Stillingia Root, bags	lb.	.06 .07
Stone Root, bags	lb.	.07 .08
St. Ignatius Beans, bags	lb.	... .90
St. John's Bread, bags	lb.	... .06
STRAMONIUM LEAVES, bales	lb.	.10 .11
Seed, bags	lb.	.07½ ...
Strophanthus Seed, Kombe, bags	lb.	1.60 1.80
Styrax Liquid, Artificial	lb.	.26 .35
Genuine, USP	lb.	.38 .43
Sunflower Seed, bags Calif	lb.	.05 .06
South American, bags	lb.	No stocks
Tamarinds, bbls.	lb.	.05 .06
Kegs	keg	3.75 3.85
Tansy, Herb, bales	lb.	.12 .13
Thus Gum, 450 lb bbls.	lb.	.05½ .06½
THYME, Spanish, bales	lb.	.06 .07
French, bales	lb.	.07½ .08½
Tonga Root	lb.	.21 .22
Bark, bundles	lb.	.21 .22
Tonka Beans, Angostura Cases		1.40 1.50
Para cases	lb.	.60 .70
Surinam cases	lb.	.65 .75
Tragacanth Gum, No 1, 100 lb cases	lb.	.72 .77
No. 2	lb.	.57 .62
No. 3	lb.	.47 .52
Powdered, 50 lb boxes	lb.	.65 .70
Turkish cases	lb.	.45 .65
Turmeric Root Madras, bags	lb.	.06 .06½
Aleppy bags	lb.	.05½ .06
Powdered	lb.	.10 .12
China bags	lb.	.11 .12
Turpentine Venice True, 80 lb cases	lb.	.30 .38
Artificial, 80 lb cases	lb.	.15 .16
Uva Ursi Leaves, bales	lb.	.05 .05½
Valerian Root, Belgium bags	lb	.14 .15
VANILLA BEANS, Mexican, whole, cases	lb.	3.00 4.00
Cuts, cases	lb.	2.40 2.60
Bourbon, cases	lb.	.70 1.20
Vetivert Root, 100 lb bags	lb.	.20 .25
Violet Flowers, bags	lb.	.80 .85
Wahoo Bark of Root, bags	lb.	.28 .30
Bark of Tree, bags	lb.	.13 .14
White Pine Bark, Roseed, bags	lb.	.05½ .06
White Poplar Bark, bags	lb.	.06 .07½
Wild Cherry Bark, Natural thin, Green	lb.	.06 .07
Rossed bales	lb.	.09 .10
Thick Rossed, bales	lb.	.04 .05
Wild Indigo Root, bags	lb.	.09 .10
Willow Bark, bags	lb.	.05 .06
White, bags	lb.	.15 ...
Witch Hazel Bark, bags	lb.	.05 .06
Leaves, bales	lb.	.06 .07
Wormseed, American, bags	lb.	.06 .07
Wormwood, Herb, Imp., bales	lb.	.08 .09
Yellow Dock Root, bags	lb.	.07 .08
Yerba Mate, bags	lb.	.15 .18
Santa, bags	lb.	.07 .08

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